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THE WORLD JEWELLERY CONFEDERATION

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CIBJO/Pearl Commission

THE PEARL BOOK

CIBJO standard
E

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Foreword

CIBJO is the French acronym for the Confédération Internationale de la Bijouterie, Joaillerie, Orfèvrerie, des Diamants, Perles et Pierres, which translates as the International Confederation of Jewellery, Silverware, Diamonds, Pearls and Stones (normally shortened to the International Jewellery Confederation). Founded in 1926 as BIBOAH, a European organisation whose mission was to represent and advance the interests of the jewellery trade in Europe, it was reorganised in 1961 and renamed CIBJO, in 2009 it was once again reorganized and officially named “CIBJO, The World Jewellery Confederation”. Today CIBJO, which is domiciled in Switzerland, is a non-profit confederation of national and international trade associations including commercial organisations involved in the jewellery supply chain. It now has members from countries representing all five continents of the world. CIBJO printed its first deliberations on terminology and trade practices in 1968.

It is the task of CIBJO to record the accepted trade practices and nomenclature for the industry throughout the world. The records of the trade practices complement existing fair trade legislation of a nation or in the absence of relevant national laws they can be considered as trading standards. In countries where laws or norms exist, which conflict with the laws, norms or trade practices in other countries, CIBJO will support the national trade organizations to prevent trade barriers developing. The purpose of CIBJO is to encourage harmonization, promote international co-operation within the jewellery industry, consider issues which are of concern to the trade worldwide and to communicate proactively with members. Foremost amongst these the aim is to protect consumer confidence in the industry. CIBJO pursues all of these objectives through informed deliberation and by reaching decisions in accordance with its Statutes. CIBJO relies upon the initiative of its members to support and implement its standards, and to protect the trust of the public in the industry.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The work of CIBJO is accomplished through Committees, Commissions and Sectors. Committees and Commissions consider standards for use in the jewellery supply chain. Sectors represent levels of trade in the jewellery industry. Sectors and commissions advise the Executive Committee on current trade practices and issues that affect the jewellery industry.

Three independent sectors exist within the confederation:

Sector A - The Products Sector
Sector B - The Supply Chain Sector
Sector C - The Service Sector

The Executive Committee may appoint Commissions that consider detailed issues. At present these are:

Coloured Stone
Coral

Diamond
Ethics
Gemmological
Pearl
Marketing & Education
Precious Metals
World Jewellers Vigilance

The Commissions for Diamonds, Gemstones, Pearls and Precious Metals have collated the guidelines, which present the accepted trade practices for applying descriptions to these materials. It is in the best interest of all those concerned to be aware of them.

The Sectors and Commissions will propose changes in the standards, also known as the Blue Books, to the Executive Committee. After review, the Executive Committee will submit the accepted proposals for adoption to the Board of Directors and if approved they will notify the assembly of delegates of the changes at the annual congress. Furthermore, it is our mutual responsibility to support these recommendations, which concern all professional people connected with diamonds, gemstones, pearls and precious metals. CIBJO Standards are subject to government regulations in the respective jurisdictions of CIBJO members.

The national umbrella organization for each country represents, in principle, all the national trade organizations involved in the sectors mentioned above. This democratic structure, which has contributed to CIBJO's world-wide recognition also includes international trade and commercial organizations, it provides an international forum for the trade to collectively draw attention to issues and implement resulting decisions.

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Introduction

This CIBJO Pearl guide is designed to assist all those involved in natural pearls, cultured pearls, composite cultured pearls (5.12) and imitation of pearls (5.97) by recording the trade practices and nomenclature for the industry throughout the world.
The standard/rules are non-judgmental and the definitions and clauses contained herein are designed to prevent unfair or deceptive trade practices, they are formatted and worded only to ensure that each pearl, cultured pearl and artificial product bought or sold is done so with clarity and honesty. The stability of the market place depends upon the use of the proper nomenclature and the declaration of all known facts that ensure a fully informed purchase or sale, throughout the distribution pipeline all the way to the final consumer.

In the case of natural and cultured pearls it is important that those involved in sales or purchases can relate to the mollusc that produces each pearl variety and to their life environment: saltwater or freshwater. Such knowledge helps in the understanding of colour, structure, stability and rarity. It is also important to understand the culturing process; through this knowledge the differences between beaded and non-beaded culture and the relationships between nacre thickness and productivity become clear and explainable to the end user.

The following definitions apply in understanding how to implement a CIBJO standard and normative references (Blue Books, PAS).

- **“shall” indicates a requirement;**
- **“should” indicates a recommendation;**
- **“may” is used to indicate that something is permitted;**
- **“can” is used to indicate that something is possible.**

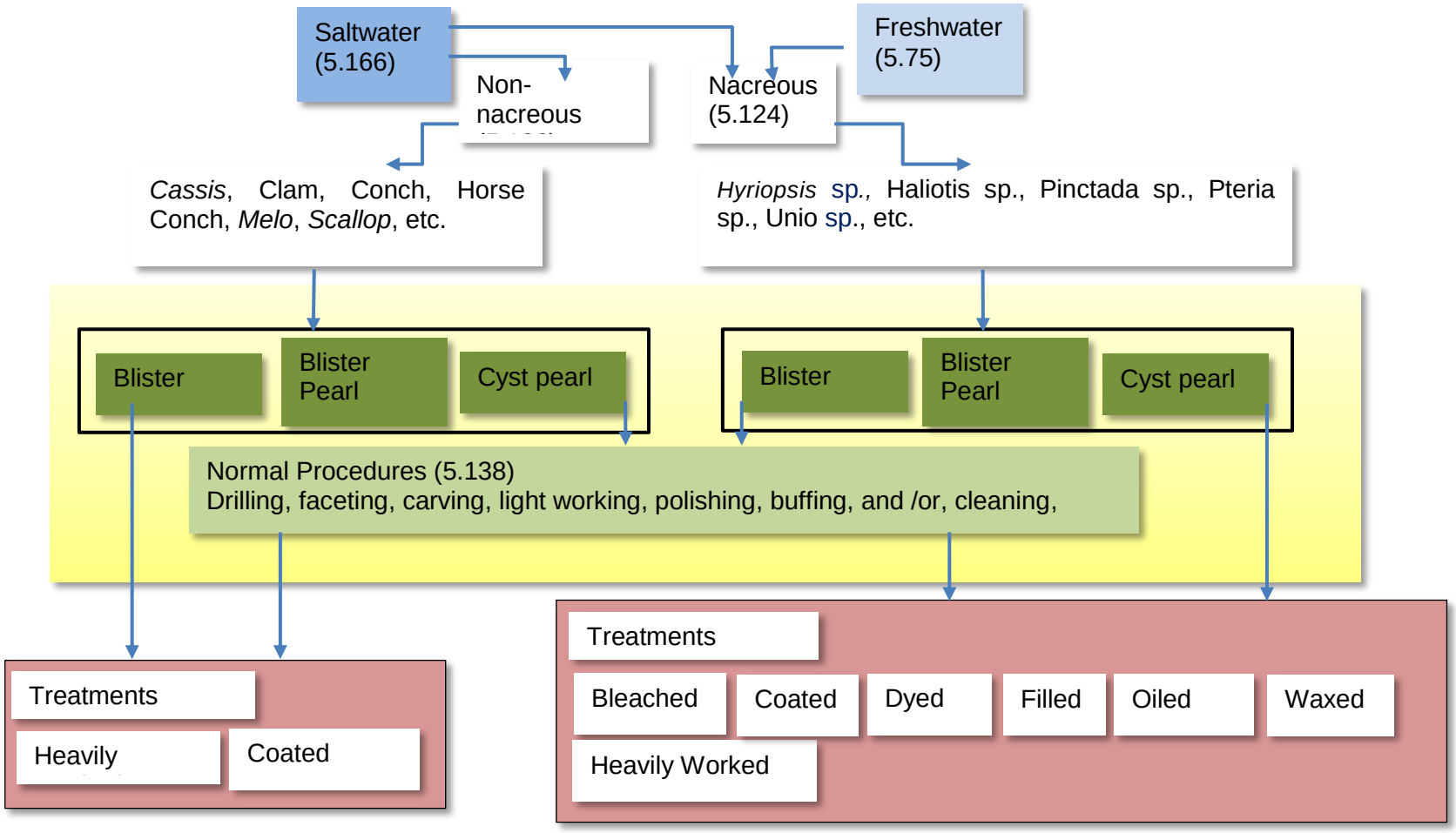
The Scope (1) of the guide is set out, as are the Normative References (2). The Terms and Definitions (5) are expansive and are extensively cross-referenced throughout the Classification of Pearl Categories (3), Normative Clauses (4) and Annexes and Tables (Clauses 6 to 10). It is important that the reader refers to the relevant Terms and Definitions when consulting each Normative Clause.

The CIBJO Pearl Commission
Mar-18

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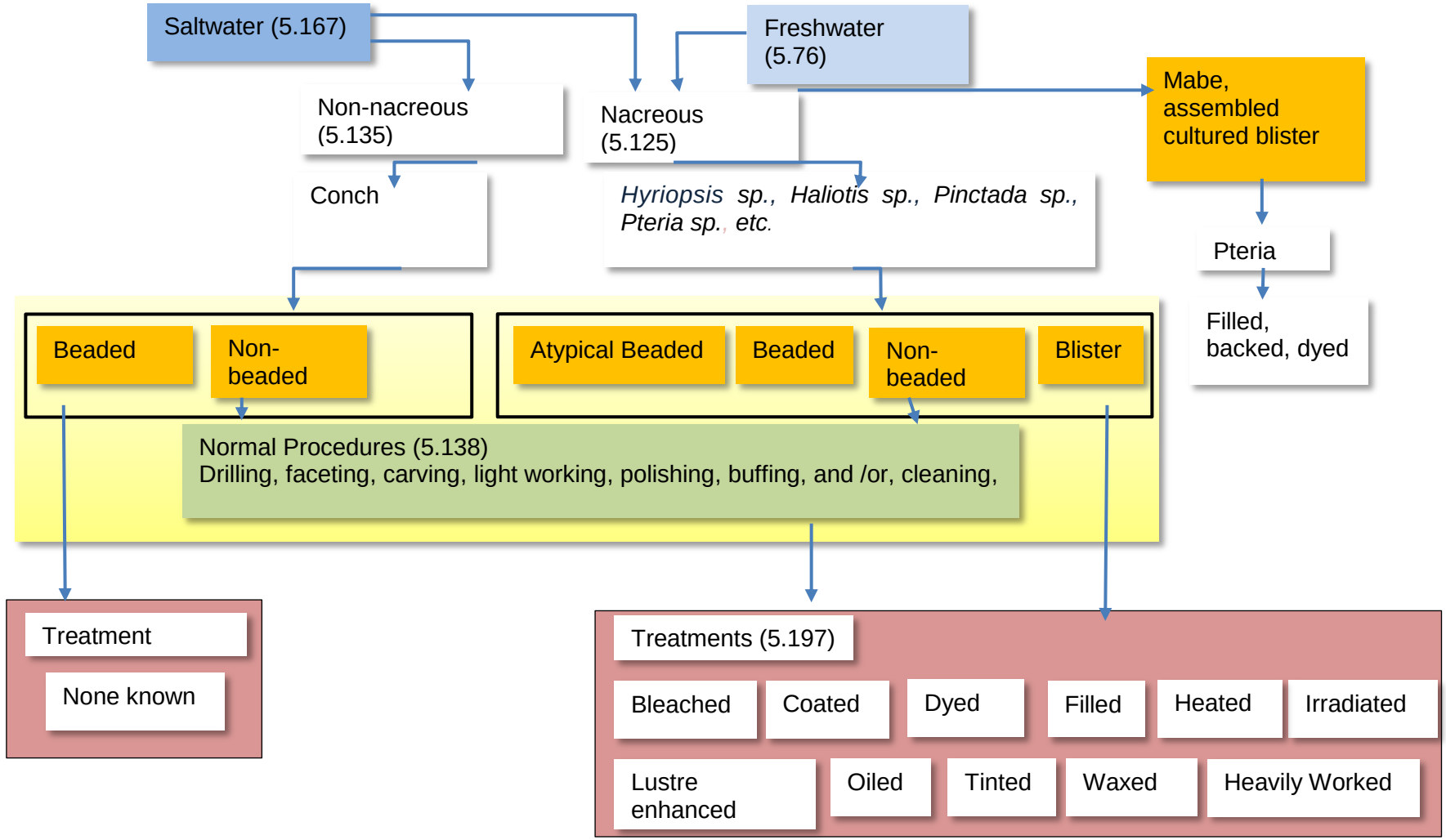
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Natural Pearl (5.131) Chart



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Cultured Pearl (5.55) Chart



NATURAL, CULTURED, COMPOSITE AND IMITATIONS OF PEARLS – TERMINOLOGY AND CLASSIFICATION (NOMENCLATURE)

1 Scope

The terminology and classification for pearls (5.150), cultured pearls (5.55), composite cultured pearls (5.12) and imitations of pearls (5.97) are established with reference to commercial usage and are in conformity with the practices of the natural and cultured pearl and jewellery trade. It shall be used by all traders participating as members of CIBJO member organizations within all member nations.

NOTE – CIBJO recognises that its standards are subject to government regulations in the respective jurisdiction of CIBJO members. In the event, there are no government regulations in a member's country, the local Industry rule will take precedence as long as it is stricter.

2 Normative references

The following referenced industry guides and conventions are useful for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the guides (including any amendments) applies.

T**he Diamond Book**, *CIBJO*, International Confederation of Jewellery, Silverware, Diamonds, Pearls and Stones), the World Jewellery Confederation, Viale Berengario 19, 20149, Milano, Italy. cibjo@cibjo.org

The Gemstone Book, *CIBJO* (International Confederation of Jewellery, Silverware, Diamonds, Pearls and Stones), the World Jewellery Confederation, Viale Berengario 19, 20149, Milano, Italy. cibjo@cibjo.org

T**he Coral Book**, *CIBJO*, International Confederation of Jewellery, Silverware, Diamonds, Pearls and Stones), the World Jewellery Confederation, Viale Berengario 19, 20149, Milano, Italy. cibjo@cibjo.org

The Precious Metal Book, *CIBJO* (International Confederation of Jewellery, Silverware, Diamonds, Pearls and Stones), the World Jewellery Confederation, Viale Berengario 19, 20149, Milano, Italy. cibjo@cibjo.org

The Gemmological Laboratory Book, A Guide for the Management and Technical Operations of Gemmological Laboratories, *CIBJO* (International Confederation of Jewellery, Silverware, Diamonds, Pearls and Stones), the World Jewellery Confederation, Viale Berengario 19, 20149, Milano, Italy. cibjo@cibjo.org

Convention on International Trade in Endangered Species of Wild Fauna and Flora, *Appendices I, II and III valid from 10 March 2016.* International Environment House • Chemin des Anémones • CH-1219 Châtelaine, Geneva, Switzerland, info@cites.org.

ISO 18323 :2015, Jewellery – Consumer confidence in the diamond industry. http://www.iso.org/iso/catalogue_detail.htm?csnumber=62163.

MolluscaBase - a taxonomically oriented database which aims to provide an authoritative, permanently updated account of all molluscan species.
http://www.molluscabase.org/aphia.php?p=browser.

3 Classification of pearl categories

The jewellery industry recognizes four categories of pearl: Natural pearls (5.131), cultured pearls (5.55), composite cultured pearls (**Error! Reference source not ound.**) and imitations of pearls (5.97). See Natural Pearl (5.131) Chart and Cultured Pearl (5.55) Chart.

3.1 Natural pearls

Natural pearls (5.131) are formed by various saltwater and freshwater molluscs within a natural pearl sac (5.132) and without human intervention. See also Natural Pearl (5.131) Chart.

3.1.1 Treated pearls

Natural pearls that have been altered to change their appearance, composition and/or durability by methods other than what is considered to be normal procedures (see clause 4.4.2.1).

3.2 Cultured pearls

Cultured pearls (5.55) are formed within a cultured pearl sac (5.54) with human intervention in the interior of productive living molluscs (5.118) in a variety of conditions depending upon the mollusc and the goals. See also Cultured Pearl (5.55) Chart.

NOTE - Cultured pearls may be subdivided into nacreous cultured pearls (5.125), non-nacreous cultured pearls (5.135), beaded (5.18) or non-beaded cultured pearls (5.134) (these may be further subdivided into *freshwater* cultured pearls (5.76), and *saltwater* cultured pearls (5.167).

3.2.1 Treated cultured pearls

Cultured pearls that have been altered to change their appearance, composition and/or durability by methods other than what is considered to be normal procedures (see clause 4.5.2.1)

3.3 Artificially produced composite cultured products

Products composed of two or more parts of which at least one is usually a hollowed out and re-filled cultured blister, they may be assembled by bonding (5.29) or by other artificial methods.

3.4 Imitations of pearls

Products that only simulate the appearance of a natural pearl (5.131) or cultured pearl (5.55).

4 Normative Clauses

4.1 General clauses

4.1.1 Description

All materials listed in clause 3 shall be named, described and displayed in accordance with the definitions, annexes and the terminology set out in all the clauses herein. This applies to all publications, advertisements (5.4), communications addressed to consumers and to the specific information given to a purchaser, prior to or during a

final sale, as well as to all commercial documents (5.47) (e.g., offers, labels, memos, delivery notes and invoices) and to appraisals, etc.

4.1.2 Disclosure

Full disclosure (5.61) by the vendor to the purchaser of all material information (5.114) shall take place whether or not the information is specifically requested and regardless of the effect on the value of the product being presented or sold.

4.1.2.1 Verbal disclosure

Full verbal disclosure (5.61) shall take place using clear and understandable language prior to the completion of a sale.

4.1.2.2 Written disclosure

Full written disclosure (5.61) shall be conspicuously included on all commercial documents (5.47) in clear and plain language so as to be readily understandable to the purchaser. The disclosure shall immediately precede the description of the materials classified in clause 3 and shall be equally conspicuous to that description.

4.1.3 Terms designed to disguise

It is contrary to the purposes of this document to make any misleading or deceptive statement, representation or illustration relating to origin, formation, production, condition or quality that does not conform in all respects with any and all the clauses contained herein.
Within certain contexts the term “natural treated pearl” may be misleading and is discouraged, for the term “treated natural pearl” emphasis shall be given to the word “treated”.

4.1.4 Display

In cases when pearls, cultured pearls, composites and imitation pearls are displayed, jewellery is decorated, with composites, imitations or treated pearls and/or treated cultured pearls that require specific information (5.184), an easily noticeable and legible label adjoining each item shall clearly indicate the required details in accordance with the clauses herein.

4.1.5 Weight

The weight of cultured pearls shall be expressed in momme (5.119), kan (5.100) liang (5.105), carats (5.33) or grams (5.87). The weight of a natural pearl shall be expressed in pearl grains (5.86), liang (5.105), carats (5.33) or methgal (5.117) a unit of weight used in the Arabian Gulf that is equal to 4.5 grams, note also the chaw (5.36) and once-the-weight (5.142).

IMPORTANT: It is acknowledged that the weight of a natural or cultured pearl may change over time.

IMPORTANT: If the drill hole of a natural pearl has been plugged it is important that this is stated when the weight is declared.

NOTE: It is an unfair trade practice to misrepresent the weight of any natural or cultured pearl or to deceive as to the weight of any natural or cultured pearl. It is also an unfair trade practice to state or otherwise represent the weight of all natural or cultured pearls contained in any article unless such weight figure is accompanied with

equal emphasis and prominence by the words "total weight", or words of similar meaning, so as to indicate clearly that the weight so stated or represented is that of all pearls in the article and not that of the centre or largest one.

NOTE: The SI (Système International) generally uses the term *mass* instead of *weight* (5.201). Mass is a measure of an object's inertial property, or the amount of matter it contains. Weight is a measure of the force exerted on an object by gravity or the force needed to support it.

4.1.6 Measurement

The measurements of a single natural or cultured pearl shall be expressed accurately in millimetres. The rounding of any measurement, if needed, shall be downwards and not upwards.

4.1.6.1 Single pearl

The following measurements shall be contained in the description of a single natural or cultured pearl;

- round shape: undrilled - widest diameter, drilled - widest diameter perpendicular to the drill hole.
- fancy shape: undrilled - maximum length, maximum diameter, drilled - maximum length, maximum diameter with one of these being perpendicular to the drill hole.

4.1.6.2 Graduated strands

The measurements used to describe a graduated strand of natural and/or cultured pearls shall include the maximum diameter, measured perpendicular to the drill hole, of the largest and the minimum diameter of the smallest. The rounding of any measurement, if needed, shall be downwards and not upwards.

4.1.6.3 Uniform strands

The measurements used to describe a uniform strand of natural and/or cultured pearls shall include the maximum diameter, measured perpendicular to the drill hole, of the largest and the minimum diameter of the smallest. The rounding of any measurement, if needed, shall be downwards and not upwards.

4.2 Natural and cultured pearls

4.2.1 Use of terms

Only those pearls that conform to the definition contained in 5.131 shall be described as natural pearls and only those pearls that conform to the definition contained in 5.55 shall be described as cultured pearls and all descriptions for natural pearls and cultured pearls shall conform to the content of all other clauses herein.

4.2.2 Biological name

Pearls and cultured pearls that are not listed in Clause 4.2, or defined in clause 5 or Clause 9, shall be described by the biological name of the mollusc from which they originate only.

NOTE: Biological name of the natural or cultured pearl may be used to correctly identify the natural or cultured pearl instead of the commercial name (Clause 9). Use

the descriptive adjective for the natural pearl or cultured pearl, if any is needed, as indicated in Clause 9.

NOTE: the correct biological name preceded or followed by a colour description may substitute for any commercial name.

NOTE: see normative reference “MolluscaBase” http://www.molluscabase.org/aphia.php?p=browser.

4.2.3 Geographical area

the names of specific geographical areas shall only be used to refer exclusively to pearls and/or cultured pearls which are found or grown exclusively from that area e.g., ‘‘Biwa Cultured Pearl’’ (5.22) shall only be used to describe cultured pearls grown in freshwater bivalve molluscs in Lake Biwa, Japan, etc., unless the name of the geographical area is part of the commercial name as listed in Clause 9 e.g., South Sea Cultured Pearl (5.180).

4.2.4 Non-permanent treatments

Pearls and cultured pearls subjected to alterations in clauses 4.4.2.3.1 and 4.5.2.3.1 that are not permanent shall require prior to the closing of the sale a declaration that the process is not permanent and that they require special care. See Clause 7.2.

4.3 Trade codes

Trade codes listed in Clause 6 shall only be used within the industry; they shall not be used for the general public. The codes are intended to facilitate the insertion of vital information on tags attached to merchandise, on invoices and/or other commercial documents (5.47) used within the trade.

4.3.1 Trade codes for untreated/unmodified natural and cultured pearls that require special care (sc)

Care advice should be regarded as normal for natural and cultured pearls across the product range and a code is unnecessary. However, there are particular cases where a code would be useful, examples of which are (also see Clauses 6)

Natural Abalone Pearl, (SC). – Often hollow and therefore fragile.
Natural Conch Pearl, (SC). – Colour may fade or change if exposed to long periods of sunlight or short exposures to x-rays
Cultured Conch Pearl (SC) – Colour may fade or change if exposed to long periods of sunlight or short exposures to x-rays

4.3.2 Trade codes for treatments

The codes listed in Annex 6 shall only be used on commercial documents (5.47) within the industry; they are not to be used for the general public. Methods of pearl treatment disclosure shall be in accordance with Clause 4.5.2.3.1., for cultured pearls and Clause 4.4.2.3.1. for natural pearls. Where multiple treatments have been applied, multiple codes shall be used, e.g., BW (Bleached/Waxed). Where special care is required to preserve the results of a treatment the initials SC (Special Care) shall be added after the code, e.g., Dsc (Dyed/Special Care). Also see Clause 7.

4.4 Natural pearl clauses

4.4.1 Terms

4.4.1.1 Natural Pearl

The term natural pearl shall only be used to describe natural pearls (5.131) i.e., pearls produced naturally within a natural pearl sac (5.132) and without any human intervention.

4.4.1.1.1 Oriental pearl

The term ‘oriental pearl’ (5.146) shall only be used for natural saltwater pearls (5.168, 5.131) and shall not be used to denote the quality or appearance of a pearl.

4.4.1.1.2 Pearl

If the word "pearl" (5.131) is used without qualification it shall refer only to a "natural pearl". However, to avoid confusion and/or misinterpretation it is recommended that natural pearls be labelled as "natural pearls”. The term "pearl" as used in the jewellery industry shall always be preceded with the term "cultured" for cultured pearls, “composite” for composite pearls or "imitation" for imitations of natural pearls and cultured pearls.

It is understood that the term ‘pearl’ is not generic when used in the trade and as described in the previous paragraph, even if the term is used in a broader sense within the public domain.

The unqualified term "pearl" shall not be used when referring to an imitation or simulant of a pearl in either commercial or non-commercial documents.

4.4.1.1.3 ‘Freshwater natural pearl’

The term ‘freshwater (5.75) natural pearl’ (5.131) shall only be used to describe natural freshwater pearls (5.77).

4.4.2 Altered natural pearls

There are three categories of natural pearls that have their appearance, composition and/or durability altered:

4.4.2.1 Natural pearls altered by normal procedures

Natural pearls which have only normal procedures applied i.e., drilling (5.64), faceting (5.67), carving (5.34), light working (5.202), peeling (5.155) polishing (5.162), buffing (5.31) and/or cleaning (5.43), do not require this information to be stated in their description at the point of sale. However, drilled, lightly worked and/or cut portions of pearls which are not visible in jewellery, plus pearls that have been Chinese drilled (5.37) or are heavily worked (5.202) shall be disclosed. For full disclosure instructions see clause 4.4.2.3.1.

NOTE – Cleaning does not include *maeshori* (5.110) treatment procedures

4.4.2.2 Natural pearls requiring general information on treatments

Natural pearls that have been bleached to produce a white appearance shall have an asterisk on commercial documents (5.47), immediately following the description or name of the pearls that relates to a footnote of equal prominence to the description or

name that appears on the same page that indicates that the pearls have been bleached.

Example: …..natural pearls*
*These natural pearls have been bleached to change their original colour and produce a uniform white appearance.

4.4.2.3 Natural pearls altered by methods requiring specific treatment declarations

Natural pearls that have been treated by coating (5.44), dyeing (5.63), filling (5.69), irradiation (5.99), oiling (5.141), heavy working (5.202) tinting (5.194) and waxing (5.200) require specific information at the point of sale. See clause 4.4.2.3.1., and clause 8.1 Annex D.

4.4.2.3.1 Disclosure requirements for natural pearls requiring specific information on treatments

When making reference, to a pearl (5.131) that has been treated as described in clause 4.4.2.1 and 4.4.2.3 above the words 'natural pearl', 'pearl', or the 'colour description' shall immediately be preceded or followed by a word or words that describe the treatment and shall, prior to the closing of the sale, require a verbal explanation that the natural pearl has been treated. In the event of a written presentation, the word describing the treatment shall be of equal emphasis and prominence, with characters of the same size and colour as those of the name itself. Do not abbreviate.

Examples: Coated natural pearl; *"colour*" (dyed) natural pearl; Filled natural pearl; Yellow (heated) natural pearl, Black (irradiated) natural pearl; Oiled natural pearl; Waxed natural pearl; worked natural pearl; or treated natural pearl.

4.4.2.3.2 Inability to inspect a treated natural pearl

If a treated natural pearl (5.131) is offered for sale without an opportunity for the buyer to personally inspect the product, (e.g., advertising (5.4) in direct mail, catalogues, online services, televised shopping programmes, etc.) an explanation shall be made that it is a treated natural pearl in the presentation and/or description of the product prior to the close of the sale.

4.4.2.3.3 Other treatments

Treatments (5.197), in addition to those mentioned in clause 4.4.2.2 must be disclosed in accordance to clause 4.4.2.3

4.5 Cultured pearls clauses

4.5.1 Terms

4.5.1.1 The term "cultured"

The term 'cultured' (5.52 and 5.55) shall only be used for cultured pearls (5.55). This applies to all cultured pearls, whichever method, species or body of water is used for their formation.

A cultured pearl that has been artificially coated, and the outer layer is not composed of nacre laid down by a mollusc shall be considered an imitation.

NOTE: the placing of an asterisk next to the word pearl making reference to an explanation of the fact the product is a cultured pearl does not comply with this clause.

4.5.1.2 "Freshwater cultured pearl"

The term 'freshwater cultured pearl' (5.76) shall always be used for cultured pearls that have been cultured in freshwater rivers, lakes and ponds. When making reference to a freshwater cultured pearl, the words 'cultured pearl' shall immediately be preceded by the word 'freshwater' and shall, prior to the closing of the sale, require a verbal explanation that it is a freshwater cultured pearl, and in the event of a written presentation, shall immediately be preceded by the word 'freshwater', with equal emphasis and prominence, with characters of the same size and colour as those of the name itself. Do not abbreviate. If a freshwater cultured pearl can be purchased without personally viewing the product, (e.g., direct mail, catalogues, online services, televised shopping programmes) explanation shall be made that it is a freshwater cultured pearl in the presentation and/or description of the product prior to the close of the sale.

NOTE: The placing of an asterisk next to the name of a freshwater cultured pearl, making reference to a footnote explanation of the fact that the product is a freshwater cultured pearl, does not comply with the requirements of this clause.

4.5.1.3 "Saltwater cultured pearl"

The term 'saltwater cultured pearl' (5.167) shall only be used for cultured pearls cultured in bodies of saltwater. When making reference to a saltwater cultured pearl, the words 'cultured pearl' do not need to be preceded by the word 'saltwater' but shall, prior to the closing of the sale, require a verbal explanation only that it is a cultured pearl, this applies also in the event of a written presentation. Do not abbreviate. If a saltwater cultured pearl can be purchased without personally viewing the product, (e.g., advertising (5.4) in direct mail, catalogues, online services, televised shopping programmes, etc.) explanation shall be made that it is a cultured pearl in the presentation and/or description of the product prior to the close of the sale.

Note -The placing of an asterisk next to the name of saltwater cultured pearl, making reference to a footnote explanation of the fact that the product is saltwater cultured pearl, does not comply with the requirements of this clause.

4.5.2 Altered cultured pearls

There are three categories of cultured pearls that have their appearance, composition and/or durability altered:

4.5.2.1 Cultured pearls altered by normal procedures

Cultured pearls which only have normal procedures applied i.e., drilling (5.64) faceting (5.67), carving (5.34), light working (5.202), cutting (5.58), polishing (5.162), buffing (5.31) and/or cleaned (5.42), do not require this information to be stated in their description at the point of sale. However drilled (5.64), lightly worked (5.202) and/or cut (5.58) portion of cultured pearls which are not visible in jewellery shall be disclosed. For disclosure instructions see clause 4.5.2.3.2

Cultured pearls that have been cut (5.58) shall be clearly described as half or three quarter cut cultured pearls.

NOTE - Cleaning does not include *maeshori* (5.110) treatment procedures.

4.5.2.2 Cultured pearls requiring general information on treatments

Cultured pearls that have been bleached to produce a uniform white appearance shall have an asterisk on commercial documents (5.47), immediately following the description or name of the pearls that relates to a footnote of equal prominence to the description or name that appears on the same page that indicates that the cultured pearls have been bleached.

Example: …..cultured pearls*
*These cultured pearls have been bleached to remove or change their colour to white.
*Cultured pearls grown in the Akoya pearl oyster are usually bleached to remove blemishes between the nucleus and the nacre, to change the colour of the nacre or produce a uniform white appearance.

4.5.2.3 Cultured pearls altered by methods requiring specific treatment declarations

Cultured pearls that have been treated by dyeing (5.63), filling (5.69), heating (5.93), irradiation (5.99), lustre enhancements e.g., “maeshori” (5.110), oiling (5.141), tinting (5.194), waxing (5.200) and chemically altered (5.38) require specific information on the treatments to be declared at the point of sale. See clause 4.5.2.3., and clause 8.2 Annex D.

4.5.2.3.1 Disclosure requirements for cultured pearls requiring specific information on treatments

When making reference, to a cultured pearl (5.55) that has been treated as described in 4.5.2.3 above the words ‘cultured pearl’ or the ‘colour description’ shall immediately be preceded or followed by a word or words that describe the treatment and shall, prior to the closing of the sale, require a verbal explanation that the cultured pearl has been treated. In the event of a written presentation, the word describing the treatment shall be of equal emphasis and prominence, with characters of the same size and colour as those of the name itself. Do not abbreviate.

Examples: “*Colour*” dyed cultured pearl; Filled cultured pearl; Yellow (heated) cultured pearl, Black (irradiated) cultured pearl; Oiled cultured pearl; waxed cultured pearl; black cultured pearls which have been treated to produce a chocolate colour; or treated cultured pearl.

4.5.2.3.2 Inability to inspect a treated cultured pearl

If a treated cultured pearl is offered for sale without an opportunity for the buyer to personally inspect the product, (e.g., advertising (5.4) in direct mail, catalogues, online services, televised shopping programmes, etc.) an explanation shall be made that it is a treated cultured pearl in the presentation and/or description of the product prior to the close of the sale.

4.5.2.3.3 Other treatments

Treatments (5.197), other than those mentioned in clause 4.5.2.2 must be disclosed in accordance to clause 4.5.2.3.1.

4.6 Artificially produced composite cultured pearls clauses

Assembled/Composite cultured pearls shall be described by the words composite or assembled according to the composite construction (except when they can be defined as an imitation (5.97) and shall, prior to the closing of the sale, require a verbal explanation that it is an assembled/composite pearl product, and, in the event of a written presentation, shall be immediately preceded by the correct names of the components of the assembled product, the names of which shall be mentioned from the upper part downwards and be separated by a slash (/). Except where all parts of the assembled/composite pearl products are of the same substance (excluding any cement) when the name of this substance shall be stated only once. Do not abbreviate. The terms assembled or composite, in the event of a written presentation, shall appear with equal emphasis and prominence, with characters of the same size and colour as those of the names of the components. Do not abbreviate. If an assembled/composite cultured pearl can be purchased without personally viewing the product, (e.g., advertising (5.4) in direct mail, catalogues, online services, televised shopping programs, etc.) explanation shall be made that it is an assembled/composite pearl in the presentation and/or in the description of the product prior to the close of the sale.

Do not use a qualifying title other than ‘assembled’ or ‘composite’ to describe any product classified under 4.6.1.

NOTE: The placing of an asterisk next to any name or combination of names of a pearl, making reference to a footnote explanation of the fact that the product is an assembled/composite, does not comply with the requirements of this clause.

4.6.1 Description and display

Assembled/Composite cultured pearls shall be named and described in accordance with (5.13) and all other clauses herein.

NOTE: The terms ‘assembled’ or ‘composite’ may be used interchangeably.

4.6.2 Composite cultured blister

Assembled/Composite cultured blisters shall be named and described in accordance with (5.14 and 5.57) and all other clauses herein.

4.7 Imitation of pearl clauses

4.7.1 Description and display

Imitations (5.97) or simulants (5.176) of natural pearls and cultured pearls shall, prior to the closing of the sale, require a verbal explanation that it is an imitation or simulant of a natural or cultured pearl, and, in the event of a written presentation shall be immediately preceded by the word ‘imitation’ or ‘simulated’, with equal emphasis and prominence, with characters of the same size and colour as those of the name itself, e.g., simulated pearl, imitation pearl etc. Do not abbreviate. If an imitation (5.97) or simulant (5.176) of a natural pearl or a cultured pearl can be purchased without personally viewing the product, (e.g., advertising (5.4) in direct mail, catalogues, online services, televised shopping programmes, etc.) explanation shall be made that it is an

imitation or simulant pearl in the presentation and/or description of the product prior to the close of the sale.

NOTE: The placing of an asterisk next to the word pearl, making reference to a footnote explanation of the fact that the product is an imitation, simulant of a pearl or cultured pearl does not comply with this clause.

4.7.2 Terms other than ‘imitation’ or ‘simulated’

Do not use a qualifying term other than ‘imitation’ or ‘simulated’ to describe any product defined in (5.97), (5.176) and (4.7).

4.7.2.1 “Cultured pearl-like”, “semi-cultured-pearl”, “faux pearls”, “mother of pearl”, etc.

The terms “cultured pearl-like”, “semi-cultured-pearl”, “faux pearls”, “mother of pearl” or any other similar expression shall not be used when referring to imitation (5.97) or simulated pearls (5.176).

4.7.2.2 Trade Marks

When Trade Marks, brands, or fancy names are used to describe imitations of pearls or cultured pearls the use shall not conceal the fact that the product is an imitation, e.g., Trade Marks shall be used in the following format:
‘Majorca Imitation Pearl’, indicating that the article in question is an imitation of a pearl whose trademark is "Majorca".

4.7.2.3 Commercial names

The name of an imitation or simulated pearl shall not be similar to the name, or the sound of the name (neither entirely, nor abbreviated, nor by way of an allusion), of any natural or cultured pearl.

4.7.2.4 Geographical areas

Do not use the name of a geographical area associated with the production, processing or exporting of natural or cultured pearls in connection with and/or referring to imitation pearls.

5 Terms and definitions

For the purposes of these CIBJO Standard/rules, the following terms and definitions apply;

5.1 Abalone Cultured Blister

a cultured blister (5.57) from an abalone (5.2).

5.2 Abalone Pearl

a natural pearl, usually multi-coloured blue or green hue, found in gastropod molluscs of the *Haliotis* (9.26) genus in the Pacific, Atlantic and Indian Ocean.

5.3 Adductor muscle

the muscle attached to both valves of a bivalve (5.21) that causes the shell to close when it contracts.

5.4 Advertisement

the activity of attracting public attention to a product or business, as by announcements in the print, broadcast, or electronic media.

5.5 Akoya

see (9.48 and 9.3).

5.6 Akoya cultured pearl

a beaded cultured pearl produced in *Pinctada fucata* (*martensii*) (9.48), the Akoya pearl oyster.

5.7 Akoya Keshi cultured pearl

a trade term for a keshi cultured pearl grown in *Pinctada fucata (martensii)* (9.48). An Akoya (5.5, 5.6) keshi cultured pearl (5.103) or an Akoya non-beaded cultured pearl formed accidentally in *Pinctada fucata (martensii)*, it is a by-product of the culturing process. The creation results from the formation of a cultured pearl sac (5.54) either following injury of the mantle rim upon handling, or from a partial piece of the inserted (transplanted) mantle tissue (5.111), or the whole inserted piece (5.157) following the rejection of a bead (5.18).

5.8 Alteration

Any change made to a pearl, cultured pearl or artificial products.

5.9 Arabian Gulf

An area in Southwest Asia that is an extension of the Indian Ocean located between Iran and the Arabian Peninsula, sometimes known as the Persian Gulf.

5.10 Arabian Gulf pearls

natural pearls produced from the *Pinctada radiata* (9.56).

5.11 Artificial products

Products which are partially or completely made by man.

5.12 Artificially produced composite pearl or cultured pearl

Product composed of two or more previously separate parts or layers, assembled by bonding (5.29) or other artificial methods of which at least one is a natural pearl or a cultured pearl.

5.13 Assembled

See composite (5.12) cultured pearl and assembled cultured pearl blister (5.14).

5.14 Assembled cultured blister

assemblages of a purpose-grown cultured blisters (5.57) which have been cut from their shell, the original bead (5.139) upon which they grew being removed and the cavity filled with various types of man-made materials, and backed by a layer of shell, the assemblages being held together by an adhesive; commonly known as Mabe (5.109) or Hankei (5.92) and occur in both fresh and saltwater environments. Not to be confused with cut cultured pearl (5.58).

5.15 Bahraini pearl

a natural pearl from Bahraini waters in the Arabian gulf produced from the *Pinctada radiata* (9.56).

5.16 Baroque

an irregularly shaped natural or cultured pearl. Baroque was originally a French adjective used to describe objects or pearls that were not symmetrical in shape.

5.17 Basra Pearl

a natural pearl from the Arabian gulf produced from the *Pinctada radiata* (9.56).

5.18 Bead for cultured pearls

a sphere (usually) or other shape (occasionally) originally formed by cutting and polishing a nacreous shell used to accommodate the nacre (5.121) secreted from a cultured pearl sac (5.54). The bead eventually forms the centre of a beaded cultured pearl (5.19).

Atypically, beads formed from natural or cultured pearls of various types or other materials may be used, however, in such circumstances the product shall be described as containing an atypical bead or the type of bead shall be named, e.g., an “atypical bead cultured pearl”, a “turquoise bead cultured pearl”, a “coral bead cultured pearl”.

5.19 Beaded Nacreous Cultured Pearl

beaded cultured pearls are usually nacreous (5.124) formations secreted in the interior of various saltwater and freshwater molluscs. A bead (5.18) is inserted into the mollusc along with a piece of mantle tissue which eventually forms the cultured pearl sac (5.54) around the bead which is in turn responsible for the secretion of nacreous layers. The outer layers of beaded nacreous cultured pearls are concentric and composed of a complex scleroprotein named conchiolin (5.49) and of calcium carbonate (usually in the form of aragonite). See nacreous cultured pearls.

5.20 Biogenic substances

a substance produced by life processes. It may be either constituents, or secretions, of plants or animals, e.g., nacre.

5.21 Bivalve

a member of the molluscan class Bivalvia, having a two-part shell, e.g., clam, oyster, mussel, and scallop.

5.22 Biwa Cultured Pearl

a freshwater beaded or non-beaded cultured pearl produced in Lake Biwa, Japan, using the freshwater bivalve mollusc *Hyriopsis schlegelii* (9.29). See also 5.195.

5.23 Black Cultured Pearl

natural colour, cultured black pearl produced using either *Pinctada margaritifera cumingii* (9.52) (the Tahitian cultured pearl (5.187), *Pinctada mazatlanica* (9.55) or *Pteria sterna* (9.64) or other pearl oysters (5.152). The colour is not caused by any subsequent processing.

5.24 Black Natural Pearl

natural colour, natural black pearl produced by *Pinctada margaritifera cumingii* (9.52 *Pinctada mazatlanica* (9.55) or *Pteria sterna* (9.64). Colour not caused by any subsequent processing.

5.25 Bleaching

to remove or change a colour by means of chemical and/or physical agents or light.

5.26 Body colour

the dominant, overall colour of the natural or cultured pearl.

5.27 Bombay Bunches

strands of round salt water natural seed pearls *(*ranging from less than 1 mm to 3 mm) (5.173), mostly with medium to high lustre and well-matching colour. These bunches are known by the trade as Bombay Bunches and are mostly marketed in Europe.

5.28 Bombay pearls

commercial name for natural pearls chiefly from *Pinctada radiata* (9.56), fished from the Arabian Gulf and Red Sea and exported through Bombay, (now known as Mumbai) India.

5.29 Bonding

the cohesion of two or more parts or layers. See composite pearl or cultured pearl definition 5.12.

5.30 Bonus cultured pearl

See Lagniappe cultured pearl (5.104) and Keshi cultured pearl (5.103).

5.31 Buffing

removing organic residues from the surfaces of natural and cultured pearls following harvest (see also polishing, 5.162).

5.32 Button-shaped

a symmetrical domed-shape with or without a flattish bottom.

5.33 Carat

a unit of weight (5.201), one carat being equivalent to 200 milligrams (1/5 gram).

5.34 Carved

cultured pearl that has been engraved on the surface.

5.35 Cerclé

see circled 5.40.

5.36 Chaw

system of converting weight into volume. Pearls in the Arabian Gulf and India are often sold by chaw. The formula for calculating the weight in Chow is; multiply the carat weight by itself and then multiply by 0.6518.

5.37 Chinese drilling

Two drill-holes that penetrate a pearl or cultured pearl from two different points on the same side, in general the flat or less round side, and meet at a point within the pearl. This drilling was designed to facilitate the use of pearls as buttons.

5.38 Chemically altered

a treatment that changes the colour of a pearl or cultured pearl without the use of a dye.

5.39 Choker

a strand of uniform sized natural pearls, cultured pearls or imitations of pearls measuring 35-40 cm (14 to 16 inches) in length.

5.40 Circled

a pearl also known as *cerclé* (5.35) with one or more concentric rings or indented grooves around it.

5.41 Clam pearl

natural pearl from the hard-shell and giant clams, e.g., *Mercenaria mercenaria* (quahog) (9.43)*, Tridacna gigas* (giant clam) (9.74).

Note: see Clause 2 Normative References; Convention on International Trade in Endangered Species of Wild Fauna and Flora

5.42 Cleaned

a natural or cultured pearl that has had loose extraneous material removed from the surface by employing only water and sometimes mild detergents and /or soft powders.

5.43 Cleaning

following its removal from a mollusc, a pearl maybe cleaned of debris by immersion in water that contains various detergents. This process does not include any bleaching chemicals and is known as ‘cleaning’.

5.44 Coating

an artificial layer of any natural or artificial substance spread over the surface, or part of the surface, of natural pearls and cultured pearls for protection, colouration, increased lustre and other optical phenomena (orient and overtone), decoration or to alter their appearance; a covering layer.

5.45 Collar

a strand of pearls, cultured pearls or imitation pearls measuring 25-33 cm (10 to 13 inches) in length.

5.46 Colour

colour has three attributes: hue, tone, and saturation. Hue is the basic impression of colour—yellow, green, blue, etc. Tone is the relative impression of lightness or darkness of the colour. Saturation is the strength or intensity of the colour. In general the colour of nacreous natural and cultured pearls may be described in terms of a combination of ‘body colour’ (5.26), ‘overtone’ (5.147) and ‘orient’ (5.145).

Nacreous natural pearls from the Arabian Gulf pearls have a wide selection of colours that have other traditional and distinctive trade names; white (Abyadh), dull white (Basali), black (Aswad), cream with a reddish hue (Nabati), white with a pinkish hue (Mushayer), whitish-blue or whitish-grey (Singbassi), white or cream with a bluish hue (Samawi), white with strong iridescent colours (Gallabi), white or cream with a strong green hue (Akhthar), glassy white or whitish-blue with high lustre (Alzujaji), rose pink (Wardi), light yellow (Ashgar), cream (Keremi).

5.47 Commercial document

Any writing or electronic transmission that evidences, anticipates or concludes a Commercial Transaction, including any agreement, memorandum of agreement, purchase order, blanket purchase order, blanket purchase agreement, purchase order acknowledgment, request for proposal, quote, warranty, representation certification, guaranty, import documentation, packing list, bill of sale, memorandum of consignment, receipt and in advertising. Commercial documents include mandatory information of the seller, and when necessary the buyer.

5.48 Conch Pearl

a non-nacreous natural pearl consisting of calcium carbonate arranged concentrically in a crossed lamellar microarchitecture. This structural characteristic usually produces a flame-like surface pattern and porcelaneous sheen. Such pearls are produced by various gastropods including the Queen Conch (*Strombus gigas aka Lobatus gigas)* (9.72), Horse Conch *(Pleuroploca gigantea)* (9.59), and the Emperor Helmet *(Cassis madagasgerensis)* (9.9). Also, known as pink pearls. See also (9.12) conch.

Note: see Clause 2 Normative References; Convention on International Trade in Endangered Species of Wild Fauna and Flora

5.49 Conchiolin

protein material ($C_{32}H_{48}N_2O_{11}$) constituting the organic portion of nacre.

5.50 Coque de perle

a shell section, cut from the curved nacreous surface of a polished Chambered nautilus then finished like an assembled pearl. *Coques de perles* are often assembled into jewellery, to resemble large oval half-pearls. They are imitations of pearls.

5.51 Cortez cultured pearl

trade name for the beaded cultured pearl produced in *Pteria Sterna* (9.64), the rainbow lipped pearl oyster, in Baja California, Mexico, in an area formerly known as Sea of Cortez.

5.52 Culture

the growth of biological material, microorganisms, animal tissue or pearls with human intervention, in specially controlled conditions.

5.53 Cultured Blister pearl

a cultured pearl that has perforated the mantle (freshwater) or the gonad cavity of the mollusc and has adhered, through layers of nacreous or non-nacreous secretions applied by the mollusc, to the inner wall of the shell. The subsequently formed layers of nacreous or non-nacreous material are continuous with those of the inner wall of the shell. They are round or irregular in shape and the base of the blister cultured pearl may be worked (5.202).

5.54 Cultured Pearl Sac

a pearl sac produced / grown from a graft (5.84) of mantle tissue (5.111) artificially inserted into the body of a host mollusc or created from mantle damage due to human handling.

5.55 Cultured Pearls

cultured pearls are formed in the interior of productive living molluscs within a cultured pearl sac (5.54) with human intervention and a variety of conditions depending upon the mollusc and the goals. See 5.125, and 5.135.

5.56 Cultured Conch Pearls

cultured pearls formed in the interior of *Strombus gigas (Lobatus gigas)* with human intervention and within a cultured pearl sac (5.54).

5.57 Cultured Blister

See 5.126.

5.58 Cut Cultured Pearls

cultured pearls that have been cut in half or three quarters to produce a flat base.

5.59 Cut Natural Pearls

natural pearls that have been cut to produce a flat base.

5.60 Cyst pearls

natural pearls (5.131) that occur in a pearl sac (5.154) and not in direct contact with the shell of a pearl-producing mollusc.

5.61 Disclosure

The act of providing all material information (5.114) to fully inform a purchaser prior to or during a final sale.

5.62 Dobo pearls

a commercial name for cultured pearls traded and exported through Dobo in Indonesia.

5.63 Dyed/Dyeing

application of a dye or stain to natural materials or artificial products to alter their colour.

5.64 Drilled

a pearl with a cylindrical hole engineered to enter at one point and exit on the opposite side. Also see part-drilled (5.149) and Chinese drilled (5.37).

5.65 Essence d'orient

French term for a solution of powdered fish scales in resin or other coating, used for manufacturing imitation pearls.

5.66 Faceted cultured pearls

cultured pearls with multiple flat, convex or concave facets that have been artificially formed on their surface.

5.67 Faceting

a polishing technique applied to cultured pearls, to obtain multiple facets.

5.68 Fiji Cultured Pearl

cultured pearl produced in *Pinctada margaritifera typica* (9.53), that is produced in several colours in the Fiji Islands.

5.69 Filling

to introduce a substance that occupies the whole or part of a void (5.199).

5.70 Fine pearl

see natural pearl.

5.71 Fissure

a very narrow opening; a fine fracture.

5.72 Fracture

An opening; a crack.

5.73 Fracture filling

To occupy the whole or part of a fracture with a substance, e.g. glass, resins, oil; to pervade; to spread throughout; to occupy completely; or make full, with the purpose of making the fracture less visible.

5.74 Frequency

the rate of occurrence (according to current knowledge) for a treatment being applied to pearls including bleaching, bonding, dyeing, irradiating, oiling, staining, tinting and/or waxing. Expressed as Unknown: Rarely: Uncommon: Occasionally: Common: Usually: or Always: in Clause 8.

5.75 Freshwater

a body of water that is non-saline, e.g., rivers, lakes, ponds and marshes.

5.76 Freshwater Cultured Pearl

cultured pearls produced in molluscs (mussels) in freshwater, e.g., *Hyriopsis schlegelii* (9.29), *Hyriopsis cumingii* (9.28).

5.77 Freshwater Natural Pearl

A natural pearl produced by a bivalve (5.21) mollusc (5.118) living in freshwater (5.75).

5.78 Gem

Another term, often used as an adjective, to describe an exceptional pearl or cultured pearl noting perfection or very high quality.

NOTE – the term “Gem” shall only be used to qualify the terms “real”, “precious”, “genuine” and “natural”.

5.79 General information

a method to provide information, at the time of sale, when materials have been subjected to an alteration (5.8) that requires a verbal disclosure (see clause 4.1.2.1) and a general comment on a commercial document, see clause (5.47)

5.80 Genuine

actually possessing the alleged or apparent attribute or character.

5.81 Gonad

the sex or reproductive organ.

5.82 Gonad grown cultured pearl

a cultured pearl grown in the gonad (5.81) of a pearl producing mollusc.

5.83 Gonad natural pearl

a horn or cusp-shaped natural pearl common in abalone (9.1), formed in the similarly shaped reproductive organ or gonad (5.81).

5.84 Graft

a piece of epithelium tissue cut from the mantle (5.111) of a nacre (5.121) producing mollusc that is inserted into the body of another nacre producing mollusc (5.118),

(usually of the same species), to initiate the growth of a cultured pearl sac (5.54) and a cultured pearl (5.55).

5.85 Grafting

the action of introducing tissue cut from the mantle (5.111) of a nacre (5.121) producing mollusc into the body of another nacre-producing mollusc (5.118) (usually of the same species) to initiate the growth of a cultured pearl sac (5.54) and thereafter a cultured pearl. Grafts can be implanted into the recipient molluscs mantle (5.111) or gonad (5.81) producing mantle-grown cultured pearls (5.112) or gonad-grown cultured pearls (5.82).

5.86 Grain

a unit of weight often used in the trade to approximate the weight of a natural pearl, a grain is equal to 0.25ct.

5.87 Gram

1/1000 of a kilogram.

5.88 Gulf pearl

a natural pearl from the Arabian Gulf produced from the *Pinctada radiata.*

5.89 Half composite cultured pearl

see 5.58.

5.90 Half cultured blister

see 5.57.

5.91 Half cultured pearl

see 5.58.

5.92 Hankei or Mabe

Japanese trade term for cultured blister (5.57).

5.93 Heating

to heat a pearl or cultured pearl to a temperature that may alters its appearance.

5.94 Hinge pearl

a natural pearl of irregular and usually elongated shape, found near the hinge of bi-valve (5.21) molluscs – not cut from the shell.

5.95 Hollow cultured pearl

a cultured pearl with a large enclosed cavity.

5.96 Hollow pearl

a natural pearl with a large enclosed cavity.

5.97 Imitation of Pearl

artificial products that only simulate the appearance of natural or cultured pearls. Any product, including organic nucleus, which have been artificially coated by natural or artificial substances, and which the outer layers are not secreted in the interior of the productive molluscs (see Simulant 5.176).

5.98 Invertebrate

an animal without an internal backbone. Examples are snails and clams (molluscs), crabs and shrimp (crustaceans), starfish and sea urchins (echinoderms), worms (annelids), corals and sea fans (cnidarians).

5.99 Irradiated / Irradiation

exposing pearls, cultured pearls, diamonds, gemstones, synthetic stones and artificial products to any form of radiation which is controlled wholly or partially by man, usually to alter their appearance.

5.100 Kan

a unit of pearl weight equal to 1,000 momme (0) or 3.75 kilograms.

5.101 Kharag

the Arabic name given for the person who is a specialist in working (5.202) pearls.

5.102 Keshi

an old Japanese trade name for a small saltwater natural or non-beaded cultured pearl that is essentially baroque in shape.

Note: the term Keshi used without qualification has been misused and is not recommended terminology for any type of pearl product unless qualified with either ‘natural’ or ‘cultured’, whichever is appropriate.

5.103 Keshi Cultured Pearl

a trade term that designates a non-beaded cultured pearl (5.134) formed accidentally or intentionally by human intervention in marine pearl oysters such as the Akoya oyster (*Pinctada fucata 9.48*), Silver/Gold lipped oyster (9.71) (*Pinctada maxima 9.54*) and Black lipped oyster (*Pinctada margaritifera cumingii 9.52*) and is a by-product of the culturing process. The creation results from the formation of a pearl sac either following injury of the mantle rim upon human handling, from a partial piece of the inserted (grafted) mantle tissue (5.111) or the whole inserted piece (5.157) following the rejection of a bead (5.125). See also South Sea Keshi Cultured Pearl (5.181). See also Tahitian Keshi cultured pearl (5.188) and Akoya Keshi cultured pearl (5.7). Alternative name; Lagniappe (or Bonus) cultured pearl.

5.104 Lagniappe cultured pearls

cultured pearls that are a by-product of the culturing process in the USA, the term, is said to be derived from the New World Spanish la ñapa, "the gift," and ultimately from Quechua yapay, "to give more." The word came into the rich Creole dialect mixture of New Orleans and there acquired a French spelling. It is still used in the Gulf States of the USA, especially southern Louisiana, to denote a little bonus. By extension, it may mean "an extra or unexpected gift or benefit. See also Keshi cultured pearl (5.103).

5.105 Liang

Imperial Chinese unit of weight equal to 250 carats (5.33).

5.106 Lightly worked natural pearl

a natural blister pearl (5.129) that has been lightly worked. (5.202).



Figure 1 Examples of lightly worked natural (nacreous) pearls that after "working" reveal the original natural pearl at their heart.

5.107 Lustre

The quality and quantity of light a natural or cultured pearl reflects from its surface or near surface**.** The appearance is often classified in Europe and the America's; excellent (reflections are bright, sharp, and distinct), good (reflections are bright but not sharp), fair (reflections are weak, hazy, and blurred) or poor (reflections are dim and diffused).
In the Arabian Gulf the lustre of natural pearls is classified as; Jiwan "meaning beauty in India (excellent perfect lustre), Shireen "meaning sweet in India" (very good lustre), Gholwah "meaning round Pearls" (Average lustre), and Badlah "meaning irregular pearls" (Poor to average lustre).

5.108 Lustre enhancement

any treatment, other than polishing, applied to enhance the lustre of a natural or cultured pearl, e.g., "maeshori" (5.110)

5.109 Mabe

Japanese trade term designating an assembled cultured blister (5.14) from *Pteria penguin* (9.63) locally known as mabe-gai, the Mabe oyster (9.34).

5.110 Maeshori treatment

a multi-part chemical treatment, including exposure to heat and/or light, that temporarily enhances lustre.

5.111 Mantle

the mantle is an organ found in molluscs. It is the dorsal body wall covering the main body, or visceral mass. The outer epidermis (surface towards the shell) of this organ secretes calcium carbonate to create a shell.

5.112 Mantle grown cultured pearl

a cultured pearl grown in the mantle (5.112) of a producing mollusc.

5.113 Marine Gastropod

a univalve mollusc that lives in the sea, e.g., see clauses (9.9, 9.38, 9.42, 9.59, and 9.72).

5.114 Material information

any information that if disclosed (5.61), prior and/or during the time of sale, would either alter the value, saleability or desirability of a pearl listed in clause 3, including any care, cleaning and/or maintenance requirements.

5.115 Matinee

a strand of pearls, cultured pearls or imitation pearls measuring 50-60 cm (20 to 24 inches) in length.

5.116 Melo Pearl

a natural non nacreous pearl (5.136) found in one of the *Melo* sp., volutes (9.38, 9.39, 9.40 9.41, and 9.42).

5.117 Methgal

a unit of weight that equals to 4.5 grams.

5.118 Mollusc

an invertebrate (5.98) animal of the phylum Mollusca.

5.119 Momme

unit of pearl weight, equal to 0.13 ounces or 3.75 grams; 1,000 momme = 1 kan (5.100). This unit was most frequently applied by the Japanese pearl industry to cultured pearls, sometimes spelt *monme.*

5.120 Mother-of-pearl

the smooth, hard, iridescent coating on the inner shell surface of some species, e.g., *Pinctada maxima (9.54)*, *Haliotis* sp., (9.1) *Turbo* sp., of mollusc that is scientifically known as nacre (5.121). Usually, but not always, natural pearls produced by a particular mollusc have the same colour, composition and general quality as the mother-of-pearl of that mollusc.

5.121 Nacre

biogenic material of nacreous natural (5.127) and cultured pearls as well as the lining of the inner part of the producing mollusc shell. Nacre is composed of layers of microscopic platelets of biomineralised aragonite (calcium carbonate), bound together by a fine network of a complex scleroprotein called conchiolin (5.49). This characteristic structure produces optical effects (orient, overtone) from within the pearl. Nacre is secreted from the mantle (5.111) of certain bivalves (5.148) and some gastropods.

5.122 Nacre thickness

the thickness of nacre (5.121) overlaying the bead (5.18) in a beaded cultured pearl, usually expressed as an average in millimetres. Nacre thickness is only relevant in the case of beaded cultured pearls (5.19). It refers strictly to the thickness of the nacre covering the bead and may not be correlated with nacre quality, i.e., the nacre, whether “thick” or “thin”, may be of a variety of qualities. Nacre thickness is closely related to the culturing period and may have some impact on the colour, lustre and durability of the beaded cultured pearl (5.19).

5.123 Nacre volume

expressed as a percentage of the total volume of a bead cultured pearl when excluding the bead.

5.124 Nacreous

composed of nacre (5.121).

5.125 Nacreous Cultured Pearls

pearls produced with or without the insertion by man of a bead (5.18) initially by grafting (5.85) mantle tissue that eventually forms a cultured pearl sac (5.54), which in turn produces the nacre necessary for the formation of a nacreous cultured pearl; the mollusc being maintained in culture until the pearl is harvested. Cultured pearl sacs (5.54) once produced may be re-used following the harvesting of cultured pearls to produce further beaded or non-beaded nacreous cultured pearls.

Cultured pearls are usually nacreous (5.124), unattached formations, secreted within a cultured pearl sac (5.54) in the interior of pearl oysters (5.152) including *Pinctada maxima* (9.54), *Pinctada margaritifera cumingii* (9.52), *Pinctada margaritifera typica 9.53, Pinctada mazatlanica* (9.55), *Pinctada fucata* (9.48), *Pteria penguin* (9.63), *and Pteria sterna* (9.64) as well as the freshwater mussels *Cristaria plicata* (9.13), *Hyriopsis schlegelii* (9.29) and *Hyriopsis cumingii* (9.28).

The surfaces of nacreous cultured pearls are composed of nacre (5.121) that is laid down in concentric layers while within the cultured pearl sac (5.54). The secretion of the nacreous layers from the cultured pearl sac, within of the pearl oyster (5.152) is a natural process instigated and partially controlled by man. This applies to all cultured pearls whether grown with or without a bead (5.18). The term ‘cultured’ is applied to pearls that have been cultured (5.55) and is not applied to other pearls.

5.126 Nacreous Cultured Blister

a nacreous cultured blister attached to the shell of a mollusc. A cultured blister is formed following the insertion by man of a nacreous or non-nacreous material that is or becomes attached to or lies against the inside of the shell of a mollusc. The mantle tissue (5.111) secretes layers of nacre on the material’s surface. These nacreous layers’ form over the inserted material and continue onto the interior of the shell, making one cohesive whole between the shell, the material and the newly formed nacreous layers. Following harvest, the cultured blister is cut from the shell, the material remaining in position.

5.127 Natural

substances which have been formed completely by nature without human interference and subsequently modified, if at all, only by means set out in clause 4.4.2.1.

5.128 Natural Blisters

a nacreous blister, is an internal protuberance of the shell, which may be low or high domed, caused by the intrusion and trapping of foreign bodies between the mantle and the inner surface of the shell that have entered through the live opened shell or have bored through the shell from the exterior. The interior of the blister may or may not contain the remains of a variety of skeletal, plant or mineral forms indeed they are often hollow following the decomposition of an organic intrusion. The secretion occurs naturally, without human intervention.

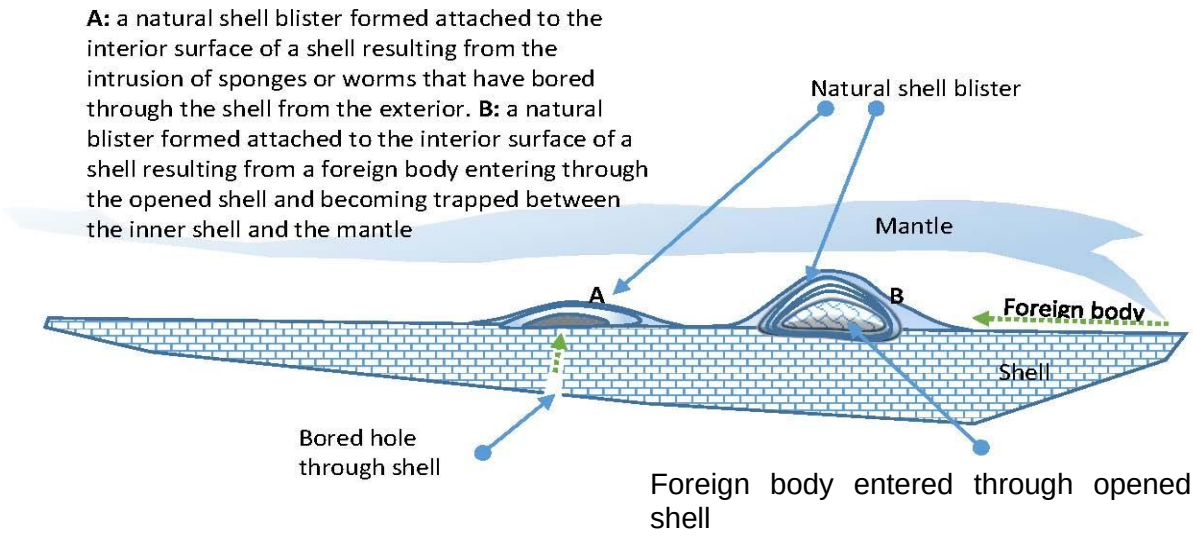


Figure 2: a stylized line-drawing showing two possibilities of how a natural blister is formed on the interior surface of a shell.

NOTE: While in most circumstances it is possible to distinguish between 'natural (nacreous) blisters' (5.128), 'lightly worked natural (nacreous) pearls' (5.106) and natural (nacreous) blister pearls (5.129), it may at times be technically challenging to make this important distinction. In concluding that the formation is a 'natural (nacreous) blister' one should be confident, through whatever means available, that the development began with the natural intrusion, into the area between the shell and the mantle of a pearl oyster, of a foreign material.

NOTE: It is important to remember that natural (nacreous) blisters as described in this definition may be artificially produced by man inserting foreign objects such as shells, fish and carved images between the mantle and the inner layer of the shell. Such products are covered under the various sections that describe the various culturing operations.

5.129 Natural blister pearl

a natural pearl that has perforated the mantle of the mollusc and has naturally adhered, through layers of nacreous or non-nacreous secretions applied by the mollusc, to the inner wall of the shell. The subsequently formed layers of nacreous or non-nacreous material are continuous with those of the inner wall of the shell. They are round or irregular in shape and are secreted without human intervention. Blister pearls are known in the Arabian Gulf as "Nimro". The base of natural blister pearls may be worked (5.202).

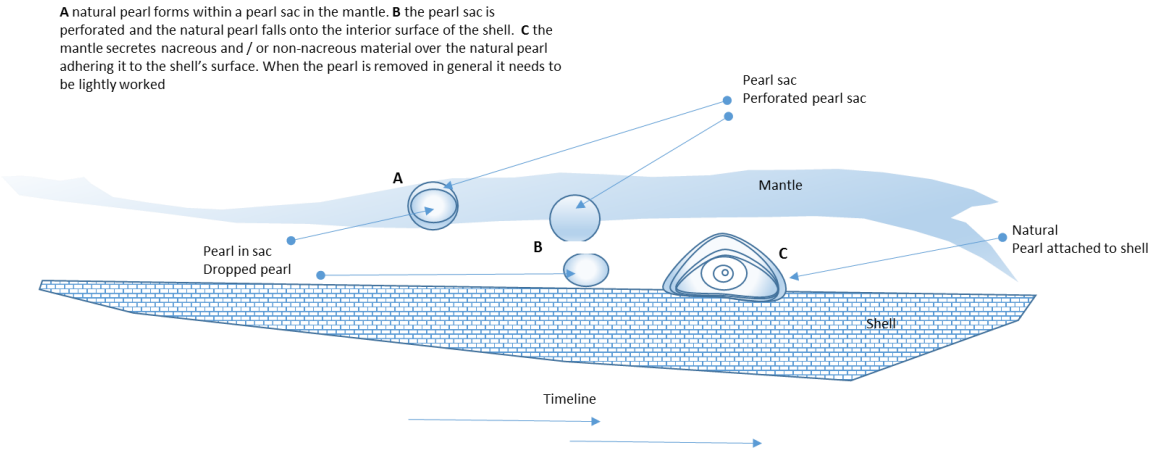


Figure 3: a stylized line drawing showing a possible scenario for the formation of a natural pearl that has become adhered to the inner wall of the shell after the natural pearl sac is perforated. Note that the gap between the mantle and the shell as well as other parts are exaggerated for clarity.

NOTE: While in most circumstances it is possible to distinguish between a natural (nacreous) blister pearl (5.128), a 'lightly worked natural (nacreous) pearl' (5.106) and a 'natural (nacreous) shell blister' (5.128) it may at times be technically challenging to make this important distinction. In concluding that the formation is a natural (nacreous) blister pearl (5.128), or a 'lightly worked natural (nacreous) pearl' one should be confident, through whatever means available, that the development began within a pearl sac in the mantle of the "pearl oyster" and subsequently the mantle has laid down further layers of nacreous and non-nacreous material on top of the pearl which are continuous with those of the inner wall of the shell (5.106).

5.130 Natural materials

Materials that are completely formed by nature, without human intervention during its formation, that may subsequently be cut, drilled, polished or treated.

5.131 Natural Pearls

natural pearl formations secreted, without human intervention, in the interior of molluscs and within naturally formed pearl sacs (5.154). They are composed of a complex scleroprotein named conchiolin (5.49) and of calcium carbonate in the form of aragonite and/or calcite arranged in concentric layers. Natural pearls may be nacreous (5.122) or non-nacreous. (5.136). See also 5.15 and 5.17.

5.132 Natural Pearl Sac

see Pearl Sac (5.154)

5.133 New World Natural Pearl

a natural pearl produced by *Pinctada mazatlanica* (Hanley, 1855), (9.55), also known as the La Paz Pearl Oyster, or the Panamic / Mexican Black-Lipped Pearl Oyster. Fisheries gave abundant supplies of naturally coloured pearls, from light-grey to black, with many intermediate tones of pink, gold and green. It is used today to produce limited quantities of bead cultured pearls.

5.134 Non-beaded cultured pearl

a cultured pearl grown without a bead (5.18).

5.135 Non-Nacreous Cultured Pearls

pearls produced with or without the insertion by man of a bead (5.18) by grafting (5.85), mantle tissue that eventually forms a cultured pearl sac (5.54), which in turn produces the calcium carbonate necessary for the formation of a non-nacreous cultured pearl; the mollusc being maintained in culture until the pearl is harvested. Cultured pearl sacs (5.54) once produced may be re-used following the harvesting of cultured pearls to produce further beaded or non-beaded non-nacreous cultured pearls.

Non-nacreous Cultured pearls are unattached formations, secreted within a cultured pearl sac (5.56) in the interior of *Strombus gigas aka Lobatus gigas* (9.72) and are referred to as cultured *conch pearls* (5.48), which are non-nacreous pearls consisting of calcium carbonate arranged concentrically in a crossed lamellar microarchitecture. This structural characteristic usually produces a flame-like surface pattern and porcelaneous sheen. A natural process instigated and partially controlled by man forms the outer layers. This applies to all cultured non-nacreous cultured pearls whether grown with or without a bead (5.18). The term ‘cultured’ is applied to pearls that have been cultured (5.52) it is not applied to other pearls.

Note: see Clause 2 Normative References; Convention on International Trade in Endangered Species of Wild Fauna and Flora

5.136 Non-nacreous natural pearls

natural pearls without a nacreous surface layer, e.g., clam pearls (5.41), conch pearls (5.48), Melo pearls (5.116), some pen pearls (5.156) and scallop pearls (5.171).

Note: see Clause 2 Normative References; Convention on International Trade in Endangered Species of Wild Fauna and Flora

5.137 Non-nucleated cultured pearl

a term used in the trade for a non-beaded (5.134) and keshi (5.102) cultured pearls.

5.138 Normal procedure

Natural and cultured pearls which have only been drilled (5.64), cut (5.58 and 5.59), faceted (5.66), carved (5.34), polished (5.162), buffed (5.31) and/or cleaned (5.42).
NOTE - For drilled and cut pearls and cultured pearls see clauses 4.4.2.1 and 4.5.2.1

5.139 Nucleus

a bead (5.18) around which a beaded cultured pearl (5.19) is formed.

5.140 Objets d’art

an object considered to be of artistic worth.

5.141 Oiling

a process, called ‘*decraqueler*’, sometimes applied to natural and cultured pearls, whereby the surface of pearls is soaked in warm oil; to diminish the appearance of cracks.

5.142 Once-the-weight

natural pearls are not priced at so much per grain (5.86) but by an elaborate method using base price referred to as the 'unit base price'. By a simple squaring of the weight

of an individual pearl in grains and multiplying the result by the base (unit) price the value is arrived at. The pearl trade uses the phrase 'once-the-weight' which is the weight of the pearl squared which is once times its own weight. Often this phrase is abbreviated to 'the once'.

5.143 Opera

a strand of pearls measuring 70-90 cm (28 to 35 inches) in length.

5.144 Organic substances

natural products of animal or plant origin used in jewellery or *objets d'art,* e.g., amber.

5.145 Orient

an optical phenomenon caused by the interference and diffraction of light from within the surface of some nacreous pearls; producing delicate shades of iridescent colours.

5.146 Oriental Pearl

an old commercial name for some natural saltwater pearls (5.131).

5.147 Overtone

the presence of an additional colour on a pearl or pearl product, usually pink, gold, green, or blue.

5.148 Oyster

a common name applied to a number of bivalved molluscs (5.21) (Kai in Japanese), some of them not closely related. Pearl oysters are of the family Pteriidae. True (edible) oysters are of the family Ostreidae.

5.149 Part-Drilled

a pearl with a cylindrical hole engineered to enter at one point but which does not exit. Sometimes known as half-drilled.

5.150 Pearl

See natural pearl clause 5.131.

5.151 Pearl Doctor

pearl specialist who can predict which layers to remove from a pearl with a dull and blemished surface to reveal an inner pearl which in most cases could be of a higher lustre and of more value. See clause 5.145.

5.152 Pearl Oyster

marine bivalves classified in the family Pteriidae and the genera *Pinctada* and *Pteria,* e.g., *Pinctada maxima* (9.54), *Pinctada margaritifera cumingii* (9.52), *Pinctada mazatlanica* (9.55), *Pinctada fucata (martensii)* (9.51), *Pinctada imbricata* (9.49), *Pinctada radiata* (9.56), *Pinctada maculata* (9.50),*Pteria penguin* (9.63), *and Pteria sterna* (9.64).

5.153 Pearl Polishing

the action of producing a polish; a technique applied to pearls and cultured pearls to remove some surface blemishes and increase lustre (5.162).

5.154 Pearl sac

a pearl sac is naturally derived from the internal or external layer of the epithelium of the mantle (5.111) or of the gill plates. The epithelial cells of the pearl sac secretes mainly nacre (5.121) in the case of pearl-oysters (5.152) and a non-nacreous calcium carbonate in the form of aragonite or calcite in the case of molluscs other than pearl-oysters, which becomes deposited over the foreign body, forming a natural pearl in due course of time. See also cultured pearl sac (5.54).

5.155 Peeling

a technique applied to remove the outer but loosely adhering layers of nacre (5.121) from a natural pearl to reveal a pristine layer of nacre below. Not to be confused with working (5.202).

5.156 Pen Pearl

see Pinna Pearl (5.161).

5.157 Piece

a “piece” of mantle tissue (5.111).

5.158 Piece holder

tool to catch the graft (5.84) or mantle tissue (5.111) piece (5.157) for insertion during the grafting (5.85) procedure; also known as piece needle (5.159).

5.159 Piece needle

see piece holder, clause 5.158.

5.160 Piece process

a “piece” of mantle tissue from a donor mollusc is grafted, by man, into a host mollusc to begin the formation of a cultured pearl sac (5.54), the essential part of the culturing process (termed the “piece process”).

5.161 Pinna pearl

a natural orange or brown non-nacreous or nacreous, or silvery ‘nacreous’ pearl, produced by a pen shell (also see pen pearl clause 5.156), a marine bivalve mollusc of the genus *Pinna* or *Atrina* (family Pinnidae).

5.162 Polishing

the action of producing a polish; a technique applied to natural and cultured pearls to remove some surface blemishes and increase lustre. (also see clause 5.153).

5.163 Princess

a strand of natural, cultured or imitation pearls measuring 43-48cm (17 to 19 inches) in length.

5.164 Real

genuine (5.80); not artificial (See clause 5.11).

5.165 Rope

a strand of pearls, cultured pearls or imitation pearls measuring about 115cm (45 inches) and longer in length.

5.166 Saltwater

a body of water that is saline e.g., sea, oceans, lagoons.

5.167 Saltwater Cultured pearl

a cultured pearl produced by a saltwater mollusc (5.118).

5.168 Saltwater Natural Pearl

a natural pearl produced by a saltwater mollusc (5.118).

5.169 Sango Cultured Pearl

a trade name for a pink atypical bead cultured pearl produced in Japan within *Pinctada fucata* that uses a pink coral bead as the substrate for nacre growth.

5.170 Sautoir

any pearl, cultured pearl or imitation pearl necklace which is longer than opera length necklace 70-90cm (28 to 35 inches). A *sautoir* is about 90cm (36 inches).

5.171 Scallop Pearl

a natural pearl produced by one of the scallops (pectinidae) (9.70). They are non-nacreous (5.136) but differ in surface appearance and composition to other non-nacreous pearls such as the conch (5.48) and Melo (5.116) varieties. The surface appearance is comprised of a patchwork of cells with each cell being formed from three sub-cells. The orientation of these sub-cells and the low magnification fibrous appearance of structures within them give the scallop pearl a peculiar surface sheen.

5.172 Scottish pearls

natural freshwater pearls from *Margaritifera margaritifera* (9.36) in Scotland.

5.173 Seed Pearl

a small salt or freshwater natural pearl (5.131) which is generally less than two but no more than three millimetres in diameter.

5.174 Shape

The shapes (or outlines) of a natural and cultured pearl may be broadly divided into five general descriptors; round, near-round, oval, button, drop, and baroque. Natural pearls in Arabian Gulf are classified locally as; “Dana" Perfectly Round (size over 7 mm), "Sijni” or Dam'ah" drop-shaped, "Batan” button shaped, "Baythawi" oval shaped, and "Emtaaz" Baroque.

5.175 Sieves

Selections of fine graduated sieves (trays) are used for sorting pearls into different sizes. In the Arabian Gulf these start from Ras *(meaning head or biggest pearl)* Batin, Theyl, Rubaa, Bukka and finally the Shiteet *(meaning seed pearls)*

5.176 Simulant

see (5.97) imitation

5.177 Skinning

see peeling clause (5.155).
Skinning soufflé pearl

5.178 Soufflé freshwater cultured pearl

a type of baroque freshwater cultured pearl (5.76) that forms around “mud” inserted into an existing cultured pearl sac (5.54) after the 1st harvest in some Chinese mussels. When drilled the interior is usually cleaned out and becomes hollow. The drilled and cleaned examples are usually very light for their size. These are ‘atypical bead cultured pearls’ (5.19).

5.179 South Sea

an area of the Pacific and the Indian Oceans between Myanmar and Northern Australia and inclusive of Indonesia and the Philippines, the habitat of the *Pinctada maxima* (9.54) pearl oyster.

5.180 South Sea cultured pearl

a cultured pearl (5.50) from a *Pinctada maxima* (9.54). Extensively cultured in areas of the Indian and Pacific Oceans, including Myanmar, Indonesia, Philippines, and Northern Australia.

5.181 South Sea Keshi Cultured Pearl

a trade term for a keshi cultured pearl grown in *Pinctada maxima* (9.54). A South Sea (5.181) keshi cultured pearl (5.102) or a South sea non-beaded cultured pearl formed accidentally in *Pinctada maxima*, it is a by-product of the culturing process. The creation results from the formation of a cultured pearl sac (5.54) either following injury of the mantle rim upon handling, or from a partial piece of the inserted (transplanted) mantle tissue (5.111), or the whole inserted piece (5.157) following the rejection of a bead (5.18). Some are hollow or contain relatively large amounts of organic matter.

5.182 Spat

larval molluscs (5.118) that have settled on a hard substratum, to grow to adulthood.

5.183 Special care

additional care needed to preserve the appearance of natural and cultured pearls, or artificial products (5.11) or any alteration that may have been applied.

5.184 Specific information

a method to provide information to consumers in all publications, advertisements, communications, commercial documents (5.47) and at the time of sale, when materials have been subjected to a treatment that requires a combination of a verbal and written disclosure see clause 4.1.2.1. and 4.1.2.2 Also see clause 4.1.2

5.185 Stability

a measure of the ability of gemstones and organic substances (5.144) to maintain their appearance under normal wear and care. The ability of a process or a treatment, including bleaching, bonding, dyeing, irradiating, oiling, staining, tinting and waxing, to retain its appearance in pearls and cultured pearls, under normal wear, repair, cleaning and/or display conditions, and after re-cutting.

NOTE: Some pearls that are not subjected to the processes mentioned above may change in appearance over a period of time.

5.186 Tahiti cultured pearl

see Tahitian cultured pearl (5.187).

5.187 Tahitian cultured pearl

a naturally coloured cultured pearl resulting from grafting and breeding in a natural environment, in French Polynesia, of the pearl oyster *Pinctada margaritifera cumingii* (9.52). It results from the secretion of nacre by a grafted (5.84) cultured pearl sac (5.54) around a bead (5.18) inserted in the gonad of this pearl oyster.

5.188 Tahitian Keshi cultured pearl

a trade term for a keshi cultured pearl grown in *Pinctada margaritifera cumingii* in French Polynesia. The Tahiti keshi cultured pearl (see also 5.102) or Tahiti non-beaded cultured pearl (5.134), is formed accidentally in this pearl oyster in French Polynesia and is a by-product of the culturing process. The creation results from the formation of a cultured pearl sac (5.54) either following injury of the mantle rim upon handling, from a partial piece of the inserted (transplanted) mantle tissue (5.111) or the whole inserted piece (5.157) following the rejection of a bead (5.18). Some Tahiti keshi cultured pearls are hollow or contain relatively large amounts of organic matter.

5.189 Tahitian natural pearl

a natural pearl secreted in the interior of the pearl oyster *Pinctada margaritifera cumingii* (9.52) native to French Polynesia.

5.190 Thawash

an Arabian name given to the pearl merchant.

5.191 Three-quarter composite cultured pearl

See clause 5.12.

5.192 Three quarter cultured blister

see 5.57.

5.193 Three quarter cultured pearl

See 5.58.

5.194 Tinting

a treatment which causes a subtle change in colour and/or appearance (Often associated with bleaching).

5.195 Tissue nucleated cultured pearl

a term used in the trade for a non-beaded cultured pearl.

5.196 Trade codes

a list used within the trade, consisting of one or more letters, for labelling treated gemstones and organic and biogenic substances. (See Clause 6)

5.197 Treated pearls or treated cultured pearls

pearls or cultured pearls which have been altered by methods other than normal procedures (5.138) to change their colour, composition and/or appearance and / or durability that requires specific information.

5.198 Venezuelan pearl

natural pearl found in *Pinctada imbricata* (Röding, 1798) or the Atlantic Pearl Oyster, ranges naturally in the western Atlantic from Bermuda and Florida to northern South America. The Atlantic Pearl Oyster is the source of Columbus's pearls.

5.199 Void

an empty space that is either entirely or partially contained within a natural or cultured pearl including a drill hole (5.64).

5.200 Waxing

the application of a colourless wax or similar products to, or near, the surface of a pearl.

5.201 Weight

mass of a pearl cultured pearl, diamond, gemstone, synthetic stone or related artificial product. See Clause 5.86, 5.87, 5.100, and 0.

NOTE: The SI (Système International) generally uses the term *mass* instead of *weight*. Mass is a measure of an object's inertial property, or the amount of matter it contains. Weight is a measure of the force exerted on an object by gravity or the force needed to support it.

5.202 Working

a method used that removes blemishes or reshapes mainly natural pearls. Often applied to natural blister pearls (5.129) that had become attached to the inner wall of the shell to remove or disguise any remaining shell attachment (lightly worked Figure 4) and to natural pearls (5.131) that are out-of-round to baroque in order to give them a round shape (heavily worked Figure 5), most commonly seen with non-nacreous natural pearls. Not commonly applied to cultured pearls. Not to be confused with 'peeling' (5.155).

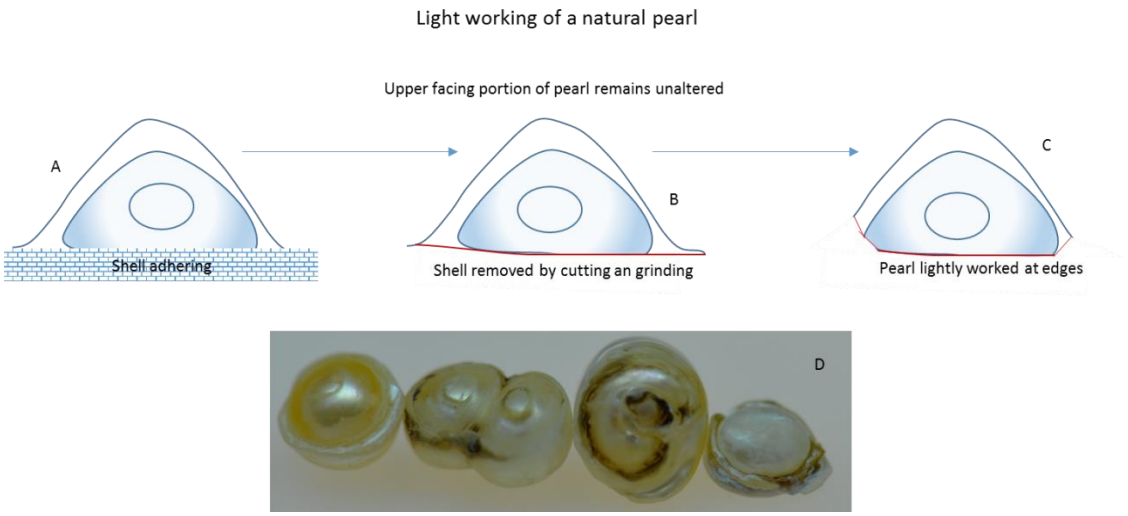


Figure 4: schematic drawing showing a progression from A where a natural pearl is adhering to the shell, B where the shell has been removed by cutting and grinding and C where the edges have been lightly worked either to fit an item of jewellery or simply to make the pearl more presentable. D are actual examples where the A to C process has taken place.

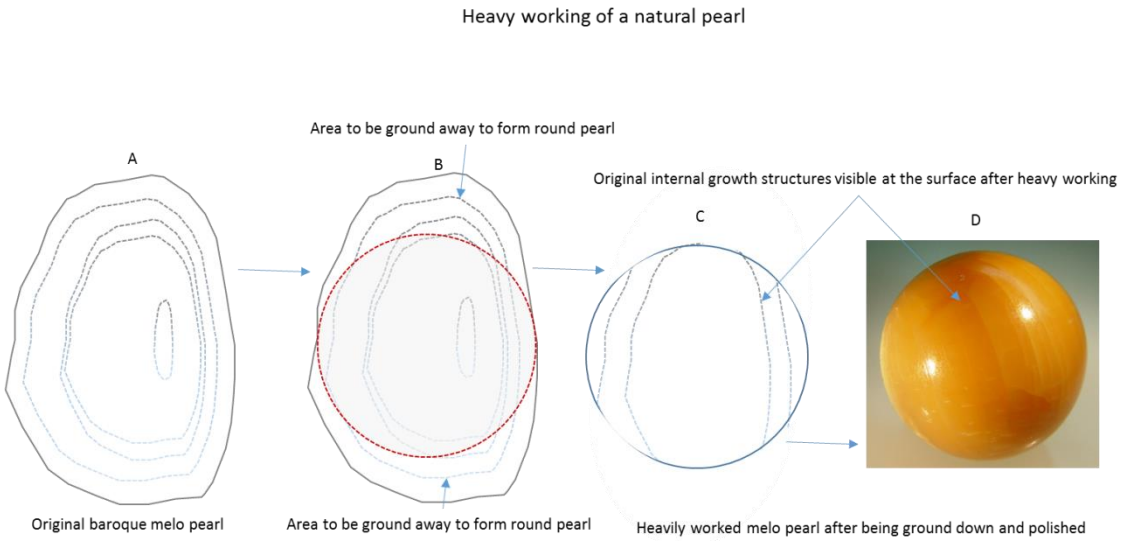


Figure 5: Schematic drawing showing a progression from A where a natural Melo (or any other type on non-nacreous) pearl is baroque and maybe poor on the surface, B showing the areas to be ground away to form a round pearl and C the heavily 'worked to round' natural Melo (or any other type on non-nacreous) pearl revealing previously internal growth feature now on the surface and D an actual example.

6 Annex A (normative) Trade codes

6.1 Trade codes and care requirements for treated natural and cultured pearls

Trade codes shall only be used within the industry

Code	Treatment	Comments
B	Bleaching	Using a bleaching agent to remove or alter colour. This treatment may not be permanent regardless of special care requirements
C (SC)	Coating	The application of a coating to the surface. This

		treatment is not permanent regardless of special care requirements
CA	Chemically altered	Changes the colour appearance without the use of a dye.
D (SC)	Dyeing	Altering colour appearance by using dyes. This treatment is not permanent regardless of special care requirements
F (SC)	Filling	Filling of cavities, both surface and internal. This treatment is not permanent regardless of special care requirements
H	Heating	Heating to enhance colour
R (SC)	Irradiation	Using radiation of various wavelengths to alter the colour appearance
L (SC)	Lustre enhancement	The use of chemicals and /or special polishing techniques to improve lustre. This treatment is not permanent regardless of special care requirements
O (SC)	Oil/Resin	The application of oils or resins usually used to disguise fractures in the pearl. This treatment is not permanent regardless of special care requirements.
T	Tinted	The light application of a light-coloured dye, usually pink (sometimes known as pinking). This treatment is not permanent regardless of special care requirements.
W (SC)	Waxing	The application of a wax to disguise fractures and/or improve lustre. This treatment is not permanent regardless of special care requirements
Wk	Working / peeling	To alter the shape of a pearl by grinding and polishing or remove blemishes.

6.2 Other Trade codes

N the “N” code is for pearls and cultured pearls that have not been treated
SC the SC code is for pearls and cultured pearls that require special care (4.3.1)

7 Annex B (normative) Care requirements for natural and cultured pearls

7.1 Normal care

With all natural and cultured pearls avoid rough handling and when not wearing items of jewellery keep them separated from each other to avoid scratches. In addition, cosmetics should be applied before and not after any natural or cultured pearls are put on. Following wear, natural and cultured pearls require cleaning with a soft cloth that has been dampened in clean water and they should not be wrapped in moisture absorbing materials, such as cotton wool. When not worn for extended periods; at regular intervals, natural and cultured pearls should be wiped, with a soft cloth that has been dampened in clean water. For special care see Clauses 7.2.

7.2 Special Care

In addition to normal care, natural and cultured pearls shall have special care requirements that include instructions that they should not be worn while carrying out heavy work, should be kept away from all solvents or subjected to high temperatures as well as ultrasonic cleaning and should be kept away from acids.
This care advice should be regarded as normal for natural and cultured pearls across the product range and should be conveyed to the purchaser.

7.2.1 Special care for Abalone pearls, natural and some cultured blisters

Abalone (9.1) as well as natural and cultured blisters (5.128 and (5.57) are prone to fracture easily and shall have special care advice that includes instructions that they are not for everyday wear and should not be worn while carrying out heavy work.

NOTE – Natural abalone pearl (sc), is often hollow and therefore fragile

7.2.2 Fading and other colour changes

The colour of some natural and cultured pearls may fade when exposed to natural sunlight, artificial light or strong display lights. Some natural and cultured pearls that have been colour treated may fade or revert to their original colour when exposed to natural sunlight, artificial light or strong display lights. In these cases, special care advice shall include instructions that these natural or cultured pearls should not be exposed to strong natural or artificial light or to strong display lighting for an extended period of time.

NOTE - Natural Conch Pearl, (SC). – Colour may fade or change if exposed to long periods of sunlight or short exposures to x-rays
NOTE - Cultured Conch Pearl (SC) – Colour may fade or change if exposed to long periods of sunlight or short exposures to x-rays

8 Annex C – (informative) Trade names of natural and cultured pearls

8.1 Trade names for natural pearls

Pearl type, growth instigation and environment. Mollusc (Genus and species)	Trade term	**Colour**	Treatments Treatment type and (trade code).	Frequency (5.74)	Requires Specific or No Information	Care advice (see Clause 7 Annex B for all clauses referred to in this column)
Natural Non-Nacreous Saltwater Pearl from various molluscs including; the Queen Conch (*Strombus gigas aka Lobatus gigas)* (9.72), Horse Conch *(Pleuroploca gigantea)* (9.59), and the Emperor Helmet *(Cassis madagasgerensis)* (9.9).	Conch Pearl (5.48)	All colours	Oiled 5.141 (O)	Rarely	4.4.2.3	7.1, 7.2 and 7.2.2
Natural Nacreous Saltwater Pearl from various *Haliotis* sp. (9.26) - about 100 named species.	Abalone Pearl (5.2)	All colours	Oiled 5.141 (O)	Rarely	4.4.2.3	7.1 and 7.2
			Filled 5.69 (F)	Occasionally	4.4.2.3	7.2 and 7.2.1

Pearl type, growth instigation and environment. Mollusc (Genus and species)	Trade term	**Colour**	Treatments Treatment type and (trade code).	Frequency (5.74)	Requires Specific or No Information	Care advice (see Clause 7 Annex B for all clauses referred to in this column)
Natural Nacreous Saltwater Pearl from; Pinctada fucata (9.48), Pinctada imbricata (9.49), Pinctada maculata (9.50), Pinctada margaritifera cumingii (9.52), Pinctada maxima (9.54), Pinctada mazatlanica (9.55), or Pinctada radiata (9.56).	Blister Pearl (**Error! Reference source not found.**)	All colours	Oiled 5.141 (O)	Rarely	4.4.2.3	7.1 and 7.2
			Dyed 5.63 (D)	Rarely	4.4.2.3	7.2 and 7.2.2
			Filled 5.69 (F)	Commonly	4.4.2.3	7.2 and 7.2.1
Natural Nacreous Saltwater Pearl from Pinctada fucata (9.48), Pinctada imbricata (9.49), Pinctada maculata (9.50), Pinctada margaritifera cumingii (9.52), Pinctada maxima (9.54), Pinctada mazatlanica (9.55), or Pinctada radiata (9.56).	Saltwater Pearl (5.168)	All colours	Oiled 5.141 (O)	Rarely	4.4.2.3	7.1 and 7.2
			Dyed 5.63 (D)	Rarely	4.4.2.3	7.2 and 7.2.2
			Filled 5.69 (F)	Rarely	4.4.2.3	7.2 and 7.2.1
Natural Nacreous Freshwater Pearl from; Amblema plicata (9.4), Cyrtonaias tampicoensis (9.16), Potamilis purpuratus (9.60), Margaritifera margaritifera (9.36).	Freshwater Pearl (5.77)	White, pink to purple	Oiled 5.141 (O)	Rarely	4.4.2.3	7.1 and 7.2
		All colours	Dyed 5.63 (D)	Rarely	4.4.2.3	7.2 and 7.2.2

Pearl type, growth instigation and environment. Mollusc (Genus and species)	Trade term	**Colour**	Treatments Treatment type and (trade code).	Frequency (5.74)	Requires Specific or No Information	Care advice (see Clause 7 Annex B for all clauses referred to in this column)
		Grey to black	Irradiated, 5.99 (R)	Rarely	4.4.2.3	7.1 and 7.2
Natural Nacreous Freshwater Blister Pearl from; Amblema plicata (9.4), Cyrtonaias tampicoensis (9.16), Potamilis purpuratus (9.60), Margaritifera margaritifera (9.36).	Freshwater Blister Pearl (**Error! Reference source not found.**) .	White, pink to purple	Oiled 5.141 (O)	Rarely	4.4.2.3	7.1 and 7.2
		All colours	Dyed 5.63 (D)	Rarely	4.4.2.3	7.2 and 7.2.2
		Grey to black	Irradiated, 5.99 (R)	Rarely	4.4.2.3	7.1 and 7.2
		All colours	Filled 5.69 (F)	Rarely	4.4.2.3	7.2 and 7.2.1

8.2 Trade names for cultured pearls

Pearl type, growth instigation and	Trade term	**Colour**	Treatments			Care advice (see

			Treatment type and (trade code).	Frequency (5.74)	Requires Specific or No Information	
Assembled Nacreous Saltwater Cultured Blister from; *Pinctada maxima* (9.54) *Pinctada margaritifera cumingii* (9.52) the Abalone (*Haliotis* sp. 9.1 and 9.26) and *Pteria Penguin* (9.63) *Pteria sterna* (9.64)	Mabe (from Pteria species) or Saltwater Cultured Blister (5.13)	White	Bleached 5.25(B)	Commonly	4.5.2.2	7.2 and 7.2.1
		All colours	Dyed 5.63 (D)	Commonly	4.5.2.3	7.2 and 7.2.2
Freshwater beaded Nacreous Cultured Pearl from; Hyriopsis cumingii (9.28), Hyriopsis schlegeli (9.29), Cristaria plicata (9.13).	Freshwater Cultured Pearl (5.76)	White	Coated 5.44 (C)	Rarely	4.5.2.3	7.1 and 7.2
Freshwater non-beaded Nacreous Cultured Pearl from; Hyriopsis cumingii (9.28), Hyriopsis schlegeli (9.29), Cristaria plicata (9.13).	Freshwater Cultured Pearl (5.76)	White	Bleached 5.25 (B)	Commonly	4.5.2.2	7.2
		All colours	Dyed 5.63 (D)	Commonly	4.5.2.3	7.2 and 7.2.2
		Grey to black	Irradiated 5.99 (R)	Occasionally	4.5.2.3	7.1 and 7.2
Saltwater non-beaded Nacreous Cultured Pearl from; Pinctada fucata (9.48), Pinctada margaritifera cumingii (9.52), Pinctada maxima (9.54)	Keshi Saltwater Cultured Pearl (5.103)	White to yellow and grey to black	Dyed 5.63 (D)	Rarely	4.5.2.3	7.2 and 7.2.2

Pearl type, growth instigation and environment. Mollusc (Genus and species)	Trade term	**Colour**	Treatments Treatment type and (trade code).	Frequency (5.74)	Requires Specific or No Information	Care advice (see Clause 7 Annex C for all clauses referred to in this column)
Saltwater Beaded Nacreous Cultured Pearl from; Pinctada fucata (9.48), Pinctada imbricata (9.49), Pinctada maculata (9.50), Pinctada margaritifera cumingii (9.52), Pinctada maxima (9.54), Pinctada mazatlanica (9.55), or Pinctada radiata (9.56). Pteria sterna (9.64)	Saltwater Cultured Pearl (5.167), Akoya Cultured Pearl (5.6) or South Sea Cultured Pearl (5.180) Tahitian Cultured Pearl (5.187)	All colours	Bleached 5.25 (B)	Commonly P. fucata, uncommon P. maxima	4.5.2.2	7.1 and 7.2
		White		Rarely P. Margaritifera		7.1 and 7.2
			Dyed 5.63 (D)	Occasionally P. fucata	4.5.2.3	7.2 and 7.2.2
		All colours	Coated 5.63 (C)	Rarely	4.5.2.3	7.2 and 7.2.2
			Oiled 5.63 (O)	Occasionally	4.5.2.3	7.1 and 7.2
		Grey to black	Irradiated, 5.99 (R)	Occasionally P. fucata		7.1 and 7.2
		All colours	Filled 5.69 (F)	Rarely	4.5.2.3	7.2 and 7.2.1

9 Annex D - Pearl producing mollusc descriptions and definitions

For the purposes of these CIBJO Standard/rules, the following terms and definitions apply;

9.1 Abalone

ear-shaped marine gastropod (9.22) of the genus *Haliotis* (9.26), with nacre in multi-hues of blue, green, cream, red and purple; the meat is edible; produces distinctive natural pearls (5.131), blisters (5.128) and cultured blisters are produced in several regions (e.g., California, New Zealand); also known as paua (New Zealand) and awabi (Japan). Has been used as a mother-of-pearl source.

9.2 Actinonaias pectorosa

Actinonaias pectorosa (Conrad, 1834) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known the Pheasant shell and the Cumberland Mucket. It is a large roughly elliptical, thick-shelled mussel. The periostracum is golden brown with broken green rays; older individuals may become brown or black. The nacre may be bluish to creamy or silvery white with iridescence along the margins. This species is found in the Tennessee and Cumberland River basins, and lives in sand and gravel in fast river currents.

9.3 Akoya pearl oyster

Pinctada fucata (*martensii*) (9.48) is used extensively for pearl culture in Japan, China and other areas. Akoya is the Japanese name for this pearl oyster. Has produced limited quantities of natural pearls.

9.4 Amblema plicata

Amblema plicata (Say, 1817) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the three ridge mussel, Blue-point, purple-tip, or fluter. The shell is elongated or rounded shell with ridges or folds on the posterior half. No sculpturing on the anterior end. Nacre pearly white, frequently stained, iridescent. Some individuals have a purple tint. *Amblema plicata* live in small to large rivers and impoundments in mud, sand, or gravel.

9.5 Argopecten purpuratus

the pectinid bivalve *Argopecten purpuratus* (Lamarck, 1819) or Chilean scallop, inhabits the Pacific Ocean, between the northern coast of Peru and central Chile, and has become an important commercial species. This species lives on sedimentary grounds in sheltered areas. Produces scallop pearls similar to those from the Lion's Paw (9.33)

9.6 Atlantic Pearl Oyster

Pinctada imbricata (9.49); the pearl oyster native to the Caribbean and south eastern North America, which was exploited by Spanish pearl gatherers in the 16th and 17th centuries.

9.7 Australian South-Sea Pearl Oyster

predominantly a silver lipped *Pinctada maxima* (9.54). that is the largest of the pearl oysters. Occurs in Australian waters and has been a source of large natural pearls, mother-of-pearl and is currently used in NW and W Australian waters for the production of South Sea cultured pearls (5.180).

9.8 Black-lipped Pearl Oyster

Pinctada margaritifera cumingii (9.52), used extensively for pearl culturing in French Polynesia. The widest-ranging pearl oyster, it has a history of natural pearl gathering in the Red Sea, the Indian Ocean, throughout the Indo-Pacific islands, Mexico and Japan (Okinawa). *Pinctada galtsoffi* in the Hawaiian Archipelago, *Pinctada mazatlanica* (9.55), Archipelago de las Perlas, Panama and Gulf of California, Mexico, *Pinctada rythraensis* the Red Sea, *Pinctada persica* in the Arabian Gulf, *Pinctada zanzibarensis*, East Africa, Madagascar, and the Seychelles.

9.9 Cassis madagascarensis

Cassis madagascarensis (Lamarck, 1822) of the family Cassidae, also known as the Emperor Helmet (9.19), is a large species with an almost flat spire, the body whorl has three rows of spiral blunted knobs and fine rounded axial ridges. The underside is peachy orange – reflecting the colour of some pearls produced by this mollusc. The lip bears about 10 strong denticles and the columella bears strong white spiral ribs and folds, tinged between the dark brown or black.

9.10 Ceylon Pearl Oyster

Pinctada radiata (9.56), the pearl oyster, also named the Gulf pearl oyster, with the longest history of sustained harvesting, native to the Gulf of Mannar, the Arabian Gulf, and the Red Sea.

9.11 Chambered nautilus

a native of the tropical Pacific, a cousin of the octopus and is a living link with the past—little changed for more than 150 million years. The nautilus has more than 90 tentacles. These tentacles have grooves and ridges that grip food and pass it into the nautilus's mouth. A nautilus swims using jet propulsion—it expels water from its mantle cavity through a siphon located near its head. By adjusting the direction of the siphon, a nautilus can swim forward, backward or sideways. See also *Coque de perle* (5.50).

9.12 Conch

common name applied to some species of marine snails (i.e., gastropods 9.22) including the Queen Conch (*Strombus gigas aka Lobatus gigas)* (9.72), Horse Conch *(Pleuroploca gigantea)* (9.59), and the Emperor Helmet *(Cassis madagasgerensis)* (9.9) (see also 9.19).

Note: see Clause 2 Normative References; Convention on International Trade in Endangered Species of Wild Fauna and Flora

9.13 Cristaria plicata

Cristaria plicata (Leach, 1815) or Cockscomb Pearl Mussel; the freshwater pearl mussel originally used for pearl culturing in both Japan and China. In Chinese, the name is zhou wen guan bang; in Japan, it is known as the Karasu mussel.

9.14 Cumberlandia monodonta

Cumberlandia monodonta (Say, 1829) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known Spectacle case. It is an elongate shell, usually pinched in the middle, dark brown to black, with poorly developed teeth. Nacre is white, iridescent. Length to 8 inches (20.3 cm). It lives in large rivers with swiftly flowing water, among boulders in patches of sand, cobble, or gravel in areas where current is reduced.

9.15 Cyclonaias tuberculata

Cyclonaias tuberculata (Rafinesque, 1820) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the Purple Wartyback, Missouri mapleleaf, purple pimpleback, or deerhorn. It has a rounded shell with a fairly prominent wing, beak covered with fine wavy sculpturing, no green stripe on the umbo, purple nacre and a deep and compressed beak cavity. The nacre is usually deep purple, or occasionally white with a purple tinge. *Cyclonaias tuberculata* lives in medium to large rivers in gravel or mixed sand and gravel.

9.16 Cyrtonaias tampicoensis

Cyrtonaias tampicoensis (Lea, 1838) or the Tampico pearly mussel has no significant external shell sculpturing and may reach over 130mm in shell length. Colouration varies from yellowish-brown to dark brown and black. Internally, nacre is typically purple, but may be multi coloured. Pearls are the same colours as the nacre. Their habitat ranges from relatively small streams to large reservoirs in waters less than 20 feet deep in Texas USA.

9.17 Ellipsaria lineolata

Ellipsaria lineolata (Rafinesque, 1820) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the Butterfly. It has a triangular, flattened shell, sharply angled posterior ridge, yellowish brown, with broken brown rays, the nacre is white and iridescent. *Ellipsaria lineolata* live in large rivers in sand or gravel. Length to 4 inches (10.2 cm).

9.18 Elliptio crassidens

Elliptio crassidens (Lamarck, 1819) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the Elephant-ear, Mule's ear, or blue ham. It is a heavy, solid, and triangular shell with dark brown to black periostracum. The nacre colour is variable, usually purple or occasionally pink or white. *Elliptio crassidens* live in large rivers in mud, sand, or fine gravel. Length to 6 inches (15.2 cm).

9.19 Emperor Helmet

see *Cassis madagascarensis* (9.9).

9.20 Fusconaia ebena

Fusconaia ebena (Lea, 1831) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as Ebonyshell; It is a round, heavy, thick, brown or black shell without rays or pustules its beak cavity is very deep. *Fusconaia ebena* live in large rivers in sand and gravel, the nacre is pearly white and iridescent. Length to 10.2 cm (4 inches).

9.21 Fusconaia flava

Fusconaia flava (Rafinesque, 1820) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the Wabash Pigtoe or just Pigtoe; it is a triangular shell with a shallow sulcus usually present on the side with rough cloth like periostracum, and deep beak cavity. The nacre is white or tinged with salmon and iridescent. *Fusconaia flava* lives in creeks to large rivers in mud, sand, or gravel.

9.22 Gastropod

a univalve mollusc that often has a head with eyes; Gastropods includes land and sea snails. (See e.g., 5.48 and 5.116).

9.23 Giant Clam

See *Tridacna gigas* 9.74

Note: see Clause 2 Normative References; Convention on International Trade in Endangered Species of Wild Fauna and Flora

9.24 Gold-lipped Pearl Oyster

a variety of *Pinctada maxima* (9.54), used extensively for pearl culturing in Australia, Myanmar, Indonesia, the Philippines and Thailand; see also Silver-lipped Pearl Oyster (9.71).

9.25 Gulf Pearl Oyster

Pinctada radiata (9.56), the pearl oyster, also named the Ceylon pearl oyster, with the longest history of sustained harvesting, native to the Arabian Gulf, the Red Sea and the Gulf of Mannar.

9.26 Haliotis

Haliotidae or abalones (9.1) are a large family of gastropods that are also known as ormers or sea ears in various localities. The shape is consistently flat with little evidence of a spire; they are either oval or round and possess a series of holes on the body whorl. The interiors are iridescent and can be very colourful, their habitat ranges from low tide zones to some hundreds of feet depth.

9.27 Horse Conch

see *Pleuroploca gigantea* (9.59).

9.28 Hyriopsis cumingii

Hyriopsis cumingii (Lea, 1852) or triangleshell pearl mussel ranges naturally in China and Vietnam. It has a thicker shell than the Cockscomb (*Cristaria plicata* 9.13), with pink to peach-coloured nacre. Both natural and cultured Triangleshell pearls occur in a wide range of colours, from white to pink, lavender and deep rose.

9.29 Hyriopsis schlegelii

Hyriopsis schlegelii (Martens, 1861) or Biwa pearly mussel used to produce non-beaded cultured pearls in Lake Biwa Japan.

9.30 La Paz Pearl Oyster

Pinctada mazatlanica (9.55), also known as the Panamic / Mexican black lipped oyster, from the eastern Pacific Ocean, presently cultured in the Gulf of California for cultured blister and cultured pearls (5.55).

9.31 Lasmigona complanata

Lasmigona complanata (Barnes, 1823) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the White Heelsplitter, the Pancake, razorback, elephant-ear, or hackle-back. It is a large, rounded, compressed, relatively thin shell, bluntly pointed at the posterior end; dark brown or black periostracum, double-looped beak sculpture. The nacre is bluish white or white and iridescent. *Lasmigona complanata* lives in pools or sluggish streams with a mud, sand, or fine gravel bottom.

9.32 Ligumia recta

Ligumia recta (Lamarck, 1819) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the Black sandshell, Black sand mussel, long John, honest John, sow's ear, or lady's slipper. It is an elongated shell, pointed on the posterior end, smooth surface, usually dark brown to black. The nacre is variable from white, pink, and salmon to deep purple and iridescent. Length to 8 inches (20.3 cm).

9.33 Lion's Paw

of the many scallops, there are three bearing the common name Lion's Paw, one of these is the exceedingly rare *Nodipecten magnificus* (Sowerby, 1835) which is largely restricted to the Galapagos Islands. The other two are *Nodipecten (Lyropecten) nodosus* (Atlantic Lion's Paw) Linnaeus 1758 and *Nodipecten (Lyropecten) subnodosus* (Pacific Lion's Paw also known as *Mano de Leon*) Sowerby 1835, the largest pectinid in tropical waters. N. *nodosus* is found in the seas of South-eastern USA to Brazil and N. *subnodosus* in the seas of Western Central America at depths that vary from 25 to 150 meters. Together the shell colours are exceptional in both their variety and depth. The outer surface of the shell may be several shades of brown, sometimes described as chocolate brown and yellow to orange while the interior varies from pearly white to shades of purple and brown. The outer surface of the N. *nodosus* shell most often displays several rows of rounded nodular protuberances running down about eight rounded ribs (although many from the southern Caribbean are smooth, potentially differentiating it from N. *subnodosus* which have no such protuberances). Both the Atlantic and Pacific Lion's Paws have fan-shaped (typical of scallops in general) equal valves with unequal ears. Lion's Paw scallops may produce distinctive natural non-nacreous pearls.

9.34 Mabe pearl oyster

See *Pteria penguin* (9.63)

9.35 Margaritifera

the taxonomic name applied to one of three entities: (1) the current genus-name applied to one group of freshwater pearl mussels, including the common pearl-producing mussel of Europe and North America, *Margaritifera margaritifera* (9.36); (2) as a species-name, that for the Black-lipped Pearl Oyster (*Pinctada margaritifera cumingii*) (9.52); (3) as a species-name, that for the Fijian Pearl oyster (*Pinctada margaritifera typica*). Margarita is the Latin term for pearl, it derives from the Greek *margaros* meaning pearl oyster.

9.36 Margaritifera margaritifera

Margaritifera margaritifera (Linnaeus, 1758) the freshwater pearl mussel grows to 140 mm in length, and burrows into sandy substrates, often between boulders and pebbles, in fast-flowing rivers and streams. It requires cool, well-oxygenated soft water free of pollution or turbidity. The mussel spends its larval, or glochidial, stage attached to the gills of salmonid fishes. The larvae attach themselves during mid to late summer and drop off the following spring to settle in the riverbed gravel where they grow to adulthood. *Margaritifera margaritifera* can be found throughout Europe and North America.

Note: see Clause 2 Normative References; Convention on International Trade in Endangered Species of Wild Fauna and Flora

9.37 Megalonaias nervosa

Megalonaias nervosa (Rafinesque, 1820) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the Washboard, Bald-pate, or board. It is a large, black shell, heavily sculptured with V-shaped ridges in the front and large folds on the sides and back, particularly in smaller shells. The nacre is white, often with purple or copper-coloured blotches and iridescent. *Megalonaias nervosa* lives primarily in large rivers with a good current, and occasionally in medium-sized streams in mud, sand, or gravel. *Megalonaias nervosa* has been used for the manufacture of shell beads that form the nucleus of beaded cultured pearls (5.19).

9.38 Melo aethiopica

Melo aethiopica (Linnaeus, 1758) a marine gastropod (5.113) and one of the Melo volutes; this species lives principally in Indonesian waters but is generally distributed from Java in the west to Papua New Guinea in the east. Their habitat is reportedly thick volcanic sand in shallow waters. Dimensions are between 200 and 250mm in length, with a largest reported size of 348mm. The protoconch is usually bright yellow in colour, but generally the shell is a light brown or mahogany it has 14 to 18 subsutural spines per whorl and three columella plaits. Sometimes *Melo aethiopica* have a creamy yellow spiral band in the middle of the whorls, and young shells may have a pattern of small dark blotches. There is no regular fishing. *Melo aethiopica* is the bailer shell used in Papua New Guinea to make the traditional jewellery. See also *Melo* pearl (5.116).

9.39 Melo amphora

Melo amphora (Lamarck, 1816) a marine gastropod (5.113) and one of the Melo volutes; this species lives all along the northern coast of Australia and the southern coast of New Guinea. Their habitat is on the sand and sand-mud bottoms from the shore and down to 10m., deep. Dimensions are between 300 and 468mm in length, with the largest registered size of 524mm. The protoconch is wide and cream coloured, the spines are long and straight but only on the first 2.5 whorls. The best distinguishing character is the absence of spines on the last adult whorl, and they have three strong columella plaits. The range of *Melo amphora* and *Melo aethiopica* coincide with each other, it may be that *Melo amphora* is a southern variant of *Melo aethiopica*. See also *Melo* pearl (5.116).

9.40 Melo broderipii

Melo broderipii (Griffith & Pidgeon, 1834) a marine gastropod (5.113) and one of the Melo volutes; this species lives mainly in the Philippines but is also recorded for New Guinea. Their habitat is on sand and mud bottoms from the shore to about 10 metres deep. Dimensions are between 250 and 350mm in length, and the registered largest

size is 371mm. *Melo broderipiis* have 20 to 25 spines per whorl and the columella has four plaits. The base colour is pale cream brown and most shells have dark chocolate brown flecks that become scarcer in the last whorl. See also *Melo* pearl (5.116).

9.41 Melo georginae

Melo georginae (Griffith & Pidgeon, 1834) a marine gastropod (5.113) and one of the melo volutes; this species is limited to the coast of southern Queensland, Australia. Their habitat is on sand bottoms between 2 and 90 meters deep, and their dimensions are between 200 and 300mm in length. The protoconch is pink and the shell has a pinkish white or cream background and, wide areas of vivid orange which form thick irregular reticulations which outline white triangles. Two dark spiral bands stand out against the yellow-orange colour of the last adult whorl. This species lives deeper than any other member of the genus. See also *Melo* pearl (5.116).

9.42 Melo melo

Melo melo (Lightfoot, 1786) a marine gastropod (5.113) and one of the melo volutes; this species lives from the South China Sea, south and west to Singapore and the Andaman Sea. Their habitat is from the shore down to 70 metres deep on mud bottoms. Dimensions are between 150 and 275mm in length with a reported record size of 362mm. The protoconch is covered by the last whorl; they have no spines and three columella plaits. Generally, they have two or three bands of dispersed dark flecks, which are rarer and more loosely spaced on the last whorl. See also *Melo* pearl (5.116).

9.43 Mercenaria mercenaria

Mercenaria mercenaria (Linnaeus, 1758) or Venus mercenaria, a clam species (class; bivalvia, order; Veneroida, family; Veneridae, genus; Mercenaria) is variously known as the northern quahog (its Indian name pronounced CO hawg), hardshell, littleneck, cherrystone, or chowder clam, is common, commercially important and found on the east coast of North America where it lives in soft sediments in shallow water. Produces clam pearls (5.41) in various shades of purple. It burrows shallowly in sediments of either mud or sand and is among the most commercially important species of invertebrate. Like other clams, it is a filter feeder. *Mercenaria mercenaria* has a large, heavy shell that ranges from being a pale brownish colour to shades of grey and white. The exterior of the shell, except nearest the umbo is covered with a series of growth rings. The interior of the shell is coloured a deep purple around the posterior edge and hinge.

9.44 Mytilus californianus

The California mussel (*Mytilus californianus* Conrad, 1837) is a large edible mussel, a marine bivalve mollusc in the family *Mytilidae*. This species is native to the west coast of North America, occurring from northern Mexico to the Aleutian Islands. California mussels are found clustered together, often in very large aggregations, on rocks in the upper intertidal zone on the open coast, where they are exposed to the strong action of the surf. They may individually contain multiple pearls.

9.45 *Nodipecten* (*Lyropecten*) *nodosus*

see scallop (9.70) and Lion's paw (9.33).

9.46 *Nodipecten* (*Lyropecten*) *subnodosus*

see scallop (9.70) and Lion's paw (9.33).

9.47 Obliquaria reflexa

Obliquaria reflexaria (Rafinesque, 1820) or *reflexa* is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as Threehorn Wartyback, just Three Horned or Hornyback, three dot, or three knot. It has large knobs that alternate from side to side that will distinguish this mussel from all other species found in the Midwest. *Obliquaria reflexaria* lives in large rivers in sand or gravel; it may be locally abundant in impoundments.

9.48 Pinctada fucata

Pinctada fucata (Gould. 1857) is the Akoya (5.5) pearl oyster (9.3), known in Japan as *Pinctada martensii* (9.51). It is sometimes considered a subspecies of *Pinctada imbricata* (9.49). The shell is of a medium size and is rather inflated and fragile. The exterior is rough and is covered with layers of greyish purple lamellae which extend over the margins. The byssal notch lies below a small winged projection of the hinge line. Its habitat ranges from Japan to China and Vietnam.

9.49 Pinctada imbricata

Pinctada imbricata (Röding, 1798) or the Atlantic Pearl Oyster, ranges naturally in the western Atlantic from Bermuda and Florida to Brazil. It is the source of Venezuelan pearls and also of Columbus's pearls.

9.50 Pinctada maculata

Pinctada maculata (Gould, 1850) a small pearl oyster or *pipi,* producing small natural and some bead cultured blister pearls (9.57) is widespread throughout French Polynesia and the Cook Islands.

9.51 Pinctada martensii

see *Pinctada fucata* (9.48) and Akoya (5.5) oyster (9.3). Also, referred to as Martins Pearl Oyster, the shell is of a medium size and is rather inflated and fragile. The exterior is rough and is covered with layers of greyish purple lamellae which extend over the margins. The byssal notch lies below a small winged projection of the hinge line. Its habitat ranges from Japan to China and Vietnam.

9.52 Pinctada margaritifera cumingii

Pinctada margaritifera cumingii (Linnaeus, 1758) commonly known as the Tahitian black-lipped pearl oyster, a large oyster that has equal compressed valves with a rich silver grey nacreous interior edged with greyish black. The exterior is formed from concentric layers of flaky green and grey lamellae. The source of natural and cultured, naturally coloured, black pearls from French Polynesia (5.187, 5.188 and 5.189), the Cook Islands, Okinawa and other South Sea islands.

9.53 Pinctada margaritifera typica

Pinctada margaritifera typica (Jameson 1901) commonly known as the Fijian Pearl Oyster: found in islands located in the West Pacific Ocean and has a very broad distribution. Found in Fiji, Australia and as far as Southern Japan. Whilst the *cumingii* variety (9.52) is known as "the black-lipped oyster" the same cannot be said for the *typica*, which exhibit unique body and shell coloration. Unlike the thriving populations of the *cumingii* in atolls the *typica* oyster exist in much smaller populations and are therefore have always largely been considered unsuitable for commercial pearling. Research in the 90's revealed that oysters found around the main islands of Fiji group

showed an interesting mix in genetics combining both *cumingii* and *typica* traits. Cultured pearls of natural colours are being produced in Fiji and are known as Fiji Cultured Pearls.

9.54 Pinctada maxima

Pinctada maxima (Jameson, 1901) the silver or golden lipped pearl oyster is the largest of the pearl oysters and may be commonly known as the Australian South Sea Pearl Oyster (prominently silver lipped), The Philippine South Sea Pearl Oyster (prominently gold lipped), the Indonesian South Sea Pearl Oyster (prominently silver lipped) and the Asian South Sea Pearl Oyster (prominently silver lipped). Traditional South Sea pearling fleets dived for this pearl oyster in the quest for its valuable large natural pearls, and for its valuable high quality Mother of Pearl (5.120) which was sought after worldwide for the mother-of-pearl industry. Today it is used extensively to produce cultured south sea pearls in Australia, Indonesia, Myanmar Philippines and elsewhere in the South Seas (5.179).

9.55 Pinctada mazatlanica

Pinctada mazatlanica (Hanley, 1855), the La Paz Pearl Oyster, or the Panamic / Mexican Black-Lipped Pearl Oyster. A medium sized oyster (18 cm) with equally compressed valves with a rich silver grey nacreous interior edged with a green or golden sheen. The exterior is formed from concentric layers of flaky light-brown and green lamellae. Habitat ranges from inside the Gulf of California (also known as the sea of cortez), to Peru. Fisheries gave abundant supplies of naturally coloured pearls, from light-grey to black, with many intermediate tones of pink, gold and green, known as New World Natural Pearls. This species was the first one to be used / farmed commercially for the production of natural pearls in La Paz, Baja California Sur, Mexico. It is used today to produce limited quantities of bead cultured pearls.

Note: All Latin-American countries employed the same Spanish name of "Madreperla" for this species. Perhaps the most ancient mention comes from Fray Bernardino de Sahagún in his "*Historia general de las cosas de Nueva España*" delivered to the Roman Pope in 1580. He called the oysters "Concha de la Hostia". Another, later, reference is from Mr. José Gastón Vivés Goyoreaux and he references the names "Concha Perla" and "Madre Perla" to this species: Hanley described this species as *Pteria* (*Margaritifera) margaritifera variety mazatlanica* in 1856.

9.56 Pinctada radiata

Pinctada radiata (Leache, 1814), or the Ceylon Pearl Oyster (9.10), is sometimes considered a variety of *Pinctada imbricata (9.49)*. Its habitat ranges through the eastern Mediterranean, Red Sea, Persian Gulf and the Indian Ocean.

9.57 Pipi Pearl Oyster

Pinctada maculata (Gould, 1850) a small pearl oyster or *pipi* (9.50), producing small natural and some bead cultured blister pearls and is widespread throughout French Polynesia and the Cook Islands.

9.58 Placopecten magellanicus

see scallop, (9.70).

9.59 Pleuroploca gigantea

Pleuroploca gigantea (Kiener, 1840) also known as the Florida Horse Conch and renamed as *Triplofusus giganteus* (Kiener, 1840), the largest of the tulip shells. The spire is tall and the whorls, the shoulders of which have blunt rounded knobs, are angular. Its shells are generally beige to light brown with a pale orange aperture and the non-nacreous pearls it produces are similarly coloured. *Pleuroploca gigantean* lives in shallow sub tidal waters.

9.60 Potamilus purpuratus

Potamilus purpuratus (1819) is a natural pearl producing freshwater bivalve mollusc found in the USA. It has an elongate and rectangular shell, inflated, dark green to black, with purple or pink nacre. *Potamilus purpuratus* inhabits large rivers e.g., Mississippi, in mud or mixed mud and gravel; common names are; Bloofer, blue mucket, and purple pocketbook.

9.61 Proptera alata

Proptera alata (Say, 1817) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the Pink Heelsplitter, Purple Heelsplitter, pancake, or hatchet-back. It has an elongated and rectangular shell, well-developed posterior wing, dark green to dark brown, with purple or pink nacre and a length to 8 inches (20.3 cm). It lives in medium to large rivers in mud or mixed mud, sand, and gravel.

9.62 Proptera purpurata

Proptera purpurata (Lamarck, 1819) (synonym) accepted scientific name *Potamilus purpuratus* (Lamarck, 1819) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as the bleufer or purple pocketbook.

9.63 Pteria penguin

Pteria penguin (Röding, 1798) also known as the Mabe (5.109) pearl oyster (9.34) or as black-winged pearl oyster. An ovate and fairly fragile shell, it has unequal valves, the upper or right valve being more inflated. The oyster has a characteristic extension to the hinge line.

9.64 Pteria sterna

Pteria sterna (Gould, 1851) the rainbow-lipped pearl oyster (*Pteria sterna*) also known as the western winged pearl oyster is a winged oyster with two unequal sized lateral extensions. The shell appears purplish-brown to silver grey and is moderately thin, usually growing to 14 cm in length. The exterior is formed from concentric layers of brown to black lamellae. Its habitat ranges from the eastern Pacific side of Baja California (Mexico), inside the Gulf of California (also known as the sea of cortez) and down to Peru. Fisheries gave abundant supplies of naturally coloured pearls, from light-grey to dark-purple, with many intermediate tones of pink, gold and green. It has been used since the 1990's for the production of nacreous cultured blisters (5.126) and beaded cultured pearls (5.19) known in the trade as Cortez Cultured Pearls.

9.65 Quadrula metanevra

Quadrula metanevra (Rafinesque, 1820) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as Monkey face or Knobbed rock shell; Rounded or squared shell with large knobs along the posterior ridge and a distinct indentation on the posterior margin that looks like a chimpanzee in profile. It

often has distinctive zigzag markings on the shell. Its length is up to 4 inches (10.2 cm). *Quadrula metanevra* live in medium to large rivers in gravel or mixed sand and gravel.

9.66 Quadrula nodulata

Quadrula nodulata (Rafinesque, 1822) is a natural pearl producing freshwater bivalve mollusc found in the USA otherwise known as Wartyback, or Two-horned pocketbook, winged pimpleback, pimpleback, nodule shell, winged orb shell. It is a rounded shell with two rows of paired knobs or pustules on the posterior half of the shell; no sulcus. The nacre is pearly white and iridescent. *Quadrula nodulata* live in large rivers or in the lower sections of medium-sized rivers in sand or fine gravel.

9.67 Quadrula pustulosa

Quadrula pustulosa (Lea, 1831) is a natural pearl producing freshwater bivalve mollusc found in the USA otherwise known as the Pimpleback, Wartyback, or Warty Pigtoe. It is a rounded shell, a green stripe on the umbo, usually densely covered with pustules. Beak cavity deep and open, not compressed as in the purple wartyback. Its length is up to 4 inches (10.2 cm), and the nacre is pearly white and iridescent.

9.68 Quadrula quadrula

Quadrula quadrula (Rafinesque, 1820) is a natural pearl producing freshwater bivalve mollusc found in the USA, otherwise known as Mapleleaf or Stranger; fairly thick shell with well-developed teeth. Squared in outline, lateral surface with two rows of pustules separated by a sulcus. Its length is up to 4 inches (10.2 cm). *Quadrula quadrula* live~~s~~ in medium to large rivers and reservoirs with a mud, sand, or gravel bottom.

9.69 Queen Conch

see *Strombus gigas aka Lobatus gigas* (9.72).

9.70 Scallop

Nodipecten (Lyropecten) nodosus (Atlantic Lion's Paw), Nodipecten (Lyropecten) subnodosus, (Pacific Lion's Paw), Placopecten magellanicus (Atlantic Sea Scallop) and Argopecten purpuratus (Chilean sea scallop) of the family pectinidae are all known to produce pearls. The scallops or pectens are bivalves that have been a part of man's existence from the earliest of times, both as a source of food and adornment. Their characteristic fan shape remains fairly consistent but there is variation in the 'ears' and sculpturing. Their wide variety of colours and patterns have caused them to be a significant collector's item, to be the focus of scientific study and to serve as industrial symbols such as that of Shell Oil.

9.71 Silver-lipped Pearl Oyster

Pinctada maxima (9.54), is used extensively for pearl culturing in Australia, the Philippine Islands, Indonesia, and Myanmar; see also Gold-lipped Pearl Oyster (9.24).

9.72 Strombus gigas

Strombus gigas (Linnaeus, 1758) as the Queen Conch may be found in areas of the Caribbean and Central Americas, has been renamed *Lobatus gigas* (Linnaeus, 1758). One of the largest in its group, it has a large flaring lip and the shoulders of its whorls bear blunt protruding nodules which are particularly large for the body whorl. Produces the pink (and other colours) conch pearl and limited numbers of cultured pearls.

Note: see Clause 2 Normative References; Convention on International Trade in Endangered Species of Wild Fauna and Flora

9.73 Triangleshell Pearl Mussel

Hyriopsis cumingii, (9.28) is the freshwater pearl mussel now predominantly used for pearl culturing in China.

9.74 Tridacna gigas

Tridacna gigas (Linnaeus, 1758), the largest and heaviest known mollusc, also known as the Giant Clam, with the two valves weighing as much as about 225kg. The elongated oval with equal valves has about five undulating and rounded ribs. The *Tridacna gigas* shell interior is porcelaneous and white, as are the pearls it produces. Distributed throughout the Indo-Pacific region.

Note: see Clause 2 Normative References; Convention on International Trade in Endangered Species of Wild Fauna and Flora

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10 Annex E – Natural & Cultured Pearls; Localities (informative)

10.1 Freshwater cultured pearl

Genus	Species		common name / sub species	Country/region	comments
Anodonta	elliptica			Vietnam	
Anodonta	jourdyi			Vietnam	
Anodonta	sp.			Philippines	
Anodonta	woodiana			China Taiwan	
Chamberlainia	hainesiana			Thailand	
Cristaria	bialata			Vietnam	
Cristaria	plicata			China	1960s-1980s
Cristaria	plicata			Japan	Lake Biwa, originally
Cristaria	plicata			Korea	
Cristaria	plicata			Philippines	
Cucumerunio	novaehollandiae			Australia	proposed for culturing, 1961
Ferreysia	corrugata			India	
Hyriopsis	cumingii			China	tissue- and some beaded
Hyriopsis	cumingii			Vietnam	
Hyriopsis	desowitzi			Thailand	
Hyriopsis	myersiana			Thailand	
Hyriopsis	schlegelii			Japan	Lake Biwa
Hyriopsis	schlegelii cumingii	x	hybrid	Japan	Lake Kasumigaura and near Lake Biwa
Lamellidens	corrianus			India	
Lamellidens	marginalis			India	
Lamprotula	mansuyi			China	
Lamprotula	sp.			Vietnam	also used for nuclei

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10.2 Saltwater cultured pearl

Genus	Species	common name / sub species	Country/region	comments
Haliotis	discus		Japan	Mabe type Hankei pearls were cultured in 1959 （Tohoku area) and in 1983 (Nagasaki).
Haliotis	iris	Rainbow Abalone/Paua	New Zealand	
Pinctada	fucata	Akoya	Australia	
Pinctada	fucata	Akoya	China	
Pinctada	fucata		Hawaii	Culturing being developed
Pinctada	fucata	Akoya	Indonesia	
Pinctada	fucata	Akoya	Japan	Since 1920s
Pinctada	fucata	Akoya	Vietnam	Production restarted after Vietnam war
Pinctada	margaritifera	subspecies *typica*	Fiji	
Pinctada	margaritifera	Black lipped pearl oyster	Australia	Experimental farms
Pinctada	margaritifera	Black lipped pearl oyster	China	
Pinctada	margaritifera	Black lipped pearl oyster	Cook Islands	Producers
Pinctada	margaritifera	Black lipped pearl oyster	French Polynesia	Major producer Trade term: Tahiti cultured pearl
Pinctada	margaritifera	subspecies *cumingii*	French Polynesia	Tuamotu, Gambier, Society islands
Pinctada	margaritifera	Black lipped pearl oyster	Kiribati	Experimental farms as of 2001
Pinctada	margaritifera	Black lipped pearl oyster	Marshall Islands	Arno Atoll, 1994; a new venture 2001 also
Pinctada	margaritifera	Black lipped pearl	Japan	Pearl culturing since 1914

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Genus	Species	common name / sub species	Country/region	comments
		oyster		
Pinctada	margaritifera	Black lipped pearl oyster	Papua New Guinea	Experimental farms
Pinctada	margaritifera	Black lipped pearl oyster	Solomon Islands	
Pinctada	maxima	Silver and gold lipped pearl oyster	Australia	
Pinctada	maxima	Silver and gold lipped pearl oyster	Cambodia	
Pinctada	maxima	Silver and gold lipped pearl oyster	China	
Pinctada	maxima	Silver and gold lipped pearl oyster	Indonesia	1928-WW II
Pinctada	maxima	Silver and gold lipped pearl oyster	Indonesia	large "Dobo pearls" from Dobo Island, 1950-1960
Pinctada	maxima	Silver and gold lipped pearl oyster	Indonesia	
Pinctada	maxima	Silver and gold lipped pearl oyster	Japan	
Pinctada	maxima	Silver and gold lipped pearl oyster	Korea	
Pinctada	maxima	Silver and gold lipped pearl oyster	Myanmar	since 1957; warmer in colour than south seas; some golden
Pinctada	maxima	Silver and gold lipped pearl oyster	Philippines	
Pinctada	maxima	Silver and gold lipped pearl oyster	Seychelles	production starting 1998 Experimental farms
Pinctada	maxima	Silver and gold lipped pearl oyster	Solomon Islands	
Pinctada	maxima	Silver and gold lipped pearl oyster	Thailand	

Genus	Species	common name / sub species	Country/region	comments
Pinctada	maxima	Silver and gold lipped pearl oyster	Vietnam	
Pinctada	mazatlanica	Panamic Black-Lip Oyster	Mexico	Culturing being developed
Pinctada	radiata		India	Culturing being developed
Pteria	penguin		Fiji	Spat being collected
Pteria	penguin	Mabe oyster	Japan	Pearl culturing since 1908
Pteria	penguin		Seychelles	Production starting 1998
Pteria	penguin		Solomon Islands	
Pteria	penguin		Thailand	
Pteria	penguin		Tonga	
Pteria	penguin		Vietnam	
Pteria	sterna	Rainbow Lipped Oyster	Guaymas, Mexico	Pearl culturing since 2000.

10.3 Freshwater natural pearl

Genus	Species	common name / subspecies	Country/region	comments
Aetheria	sp.		Egypt	Ancient times
Amblema	plicata	Three-ridge mussel, Bluepoint, Purple Tip, Fluter	USA	
Cyrtonaias	tampicoensis	Tampico pearly mussel	USA	
Ferreysia	sp.		Bangladesh	
Fusconaia	ebena	Ebony	USA	
Fusconaia	flava	Pig Toe	USA	
Lamellidens	daccaensis		Bangladesh	Gold
Lamellidens	marginalis		Bangladesh	Culturing being investigated (pink)

Genus	Species	common name / subspecies	Country/region	comments
Margaritifera	margaritifera		Europe	Historical; includes Austria, Czechoslovakia, Denmark, France, Germany, Great Britain, Norway, Russia, Scotland
Margaritifera	margaritifera		Canada	Newfoundland
Megalonaia	nervosa	Washboard	USA	
Mytilus	californianus		Canada	
Potamilis	purpuratus	Blooper, blue mucket, blue hen, purple pocketbook	USA	
Quadrula	metanevra	Monkey face	USA	
Quadrula	quadrula	Maple leaf	USA	
Unio	elongata		Great Britain	Historical
Unio	sp.		Egypt	Ancient times
Various			US	Historic in Ohio River system; nuclei for cultured pearls now

10.4 Saltwater natural pearl

Genus	Species	common name / subspecies	Country/region	comments
Argopecten	purpuratus	Chilian Scallop	Chile	
Cassis	madagascarensis	Emporor helmet		
Haliotis	australis	Silver Paua	New Zealand	
Haliotis	cracherodi	Black abalone	N.W. USA to Mexico	
Haliotis	fulgens	Green abalone	Southern California to Mexico	
Haliotis	iris	Rainbow Abalone/Paua	New Zealand	

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Genus	Species	common name / subspecies	Country/region	comments
Haliotis	rufescens	Red abalone	Southern California to Mexico	
Haliotis	sorenseni	White Abalone	USA to Mexico	
Melo	aethiopica		Papua New Guinea	
Melo	amphora		North East Australia	
Melo	broderipii		Philippines	
Melo	georginae		Southern Queensland Australia	
Melo	melo		Burma	
Melo	melo		Thailand	
Melo	melo		Vietnam	
Mercenaria	mercenaria	northern quahog, hardshell, littleneck, cherrystone or chowder clam		Also, known as *Venus mercenaria*.
Nodipecten	magnificus		Galapagos	
Nodipecten	nodosus	Atlantic lion's paw	South Eastern USA	
Nodipecten	nodosus	Atlantic lion's paw	Brazil	
Nodipecten	subnodosus	Pacific lion's paw	Western Central America	
Pinctada	fucata	Akoya pearl oyster	Bangladesh	"Available"
Pinctada	fucata	Akoya pearl oyster	Hawaii	Historical
Pinctada	imbricata	Atlantic pearl oyster	Honduras	Pre-Columbian
Pinctada	imbricata	Atlantic pearl oyster	Venezuela	Historic; Caribbean pearls
Pinctada	maculata	golden Pipi	Cook Islands	Limited harvest
Pinctada	maculata	golden Pipi	French Polynesia	Grow with/on cultured pearl oysters
Pinctada	margaritifera	Black-lipped pearl oyster	Cook Islands	Historic; mainly prior to 1970s
Pinctada	margaritifera	Black-lipped pearl	French Polynesia	Trade term: Tahiti pearl

Genus	Species	common name / subspecies	Country/region	comments
		oyster		
Pinctada	margaritifera	Black-lipped pearl oyster	Hawaii	Historical
Pinctada	margaritifera	Black-lipped pearl oyster	Arabian Gulf (Persian Gulf)	
Pinctada	margaritifera	Black-lipped pearl oyster	Red Sea	Historic centre of pearling (for MOP)
Pinctada	margaritifera	Black-lipped pearl oyster	Sudan	For MOP
Pinctada	maxima	Golden and silver lipped	Australia	
Pinctada	maxima	Golden and silver lipped pearl oyster	Malaysia	Historical (early 1900s).
Pinctada	mazatlanica		Panama	Historic (1600s)
Pinctada	mazatlanica		Peru	
Pinctada	radiata	Ceylon pearl oyster	Ceylon	Historic; gulf of Mannar
Pinctada	radiata	Ceylon pearl oyster	India	Historically extensive
Pinctada	radiata	Ceylon pearl oyster	Kuwait	Commercial pearls larger than 3 mm
Pinctada	radiata	Ceylon pearl oyster	Bangladesh	
Pinctada	radiata	Ceylon pearl oyster	Arabian Gulf (Persian Gulf)	
Pinctada	radiata	Ceylon pearl oyster	Qatar	Used as pollution monitor
Pinctada	radiata	Ceylon pearl oyster	Red Sea	Historic centre of pearling
Placenta	placenta	small white pearls	Bangladesh	
Pleuroploca	gigantea	Horse conch	USA	
Pteria	sterna	Pega pega, Concha Nácar, Rainbow Lipped Pearl Oyster, Ostra de Labios Arcoiris	Mexico	Historical (prior to 1900)
Pteria	sterna		Peru	Reference is 1916

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Genus	Species	common name / subspecies	Country/region	comments
Strombus	gigas	Queen conch	USA, Caribbean	renamed *Lobatus gigas*, see 9.72
Tridacna	gigas	Giant clam	Pacific	

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