

1. **Algae Extract:** Algae are very simple , chlorophyll-containing organisms in a family that includes more than 20,000 different known species. A number of species have been used for drugs, where they work as anticoagulants', antibiotics, antihypertensive agents, blood cholesterol reducers, dilatory agents, insecticides, and anti-tumorigenic agents.

**Cosmetic use:** Algae act as thickening agents, water-binding agents and antioxidants. Algae extract is known for its non-irritating and non-comedogenic moisturization qualities. Algae extract helps provide additional protection from irritation. Although some algae are also potential skin irritants. For example, the phycocyanin present in blue-green algae has been suspected of allergenicity and of causing dermatitis on the basis of patch tests. Other forms of algae such as Irish moss and carrageenan, contain proteins, vitamin A, sugar, starch, vitamin B1, iron, sodium, phosphorus, magnesium, copper and calcium. These are all beneficial for skin, either as emollients or antioxidants.

2. **Vaccinium vitis-idaea:** Often called lingonberry and also called cowberry (UK), foxberry, mountain cranberry, red whortleberry, low bush cranberry, mountain bilberry, partridgeberry (in Newfoundland and Cape Breton), and red berry in Labrador is a small evergreen shrub in the flowering plant family Ericaceae that bears edible fruit. It is seldom cultivated, but the fruits are commonly collected in the wild. The native habitat is the circumboreal forests of northern Eurasia and North America, extending from temperate into subarctic climates.

**Cosmetic use:** Extract of the lingonberry/cranberry family has natural components known as proanthocyanidins are responsible for this extract's antioxidant and anti-inflammatory properties on the skin.

3. **Bilberry Extract/Vaccinium myrtillus/Anthocyanidins:** Bilberries are grown in Europe, Canada and the U.S. For the history buffs, some of the health effects of eating bilberries (to promote good vision) came to light during World War 11 when English bomber pilots reported an increase in their night vision after eating bilberry jam. Bilberry extracts are now promoted for a number of vision and vein health effects such as diabetic retinopathy, cataracts, glaucoma, macular degeneration, varicose veins and hemorrhoids.

**Cosmetic use:** Extracts of this berry are known to contain flavonoid pigment known as anthocyanins - which act as powerful antioxidants and anti-tumor properties.

- 4. *Rubus chamaemorus*:** The cloudberry also known as bakeapple native to Northern Climates is a slow growing low shrub found in marshes and boggy areas of Newfoundland and Labrador. The botanical name "Chamoemorus" derives from the Greek word *Khamai* meaning "on the ground". Cloudberry is the name for both the plant and the fruit. White tiny flowers encapsulates each branch of the bush turning into pale red berries ripening into a golden yellow berry in autumn that is soft and juicy, rich in Vitamin C. Teas made from the cloudberry are an ancient herbal remedy to cure urinary tract infections.

**Cosmetic use:** Its high benzoic acid content acts as a natural preservative.

- 5. *Hamamelis Virginiana*:** Witch Hazel is a common shrub of eastern North America having small yellow flowers after the leaves have fallen.

**Cosmetic use:** Witch Hazel can have potent antioxidant properties and some anti-irritant properties. Witch Hazel water has an ethanol (alcohol) content of 70% to 80% and a tannin (antioxidant) content of 2% to 9%, tannin which is used for initial swelling from burns and can reduce inflammation.

- 6. *Sesamum indicum* seed oil:** The sesame (*Sesamum indicum* L.) oil was extracted from the seeds of the sesame that grows in Diyarbakir, SE Anatolia of Turkey. Sesame seed oil was obtained in 58 wt/wt%, by traditional solvent extraction. The methylester of sesame (*Sesamum indicum* L.) seed oil was prepared by transesterification of the crude oil. Transesterification shows improvement in fuel properties of sesame seed oil. Transesterification shows improvement in fuel properties of sesame seed oil. This study supports the production of biodiesel from sesame seed oil as a viable alternative to the diesel fuel.

**Cosmetic use:** Emollient oil similar to other non-fragrant plant oils. Natural moisturizing factor, (NMF). One of the primary elements in keeping skin healthy is making sure the structure of the epidermis (outer layer of the skin) is intact. The components that do this are often called natural moisturizing factor (NMF) or ingredients that mimic the structure and function of healthy

skin. While the oil and fat components of skin prevent evaporation and provide lubrication to the surface of skin, it is actually the intercellular matrix, along with the skin's lipid content, that gives skin a good deal of its surface texture and feel.

7. **Citrus aurantium dulcis (orange) fruit extract:** This extract comes from the fruit of the sweet orange (*Citrus aurantium dulcis* - also known as *Citrus sinensis*).

**Cosmetic use:** It is classed as a biological product and is used as a miscellaneous skin-conditioning agent as well as a fragrance ingredient.

8. **Rosemary (*Rosmarinus officinalis*):** Rosemary helps to relax muscles, including the smooth muscles of the digestive tract and uterus. Because of this property it can be used to soothe digestive upsets and relieve menstrual cramps. When used in large amounts it can have the opposite effect, causing irritation of the intestines and cramps. A tea made from the leaves is also taken as a tonic for calming nerves and used as an antiseptic. Rosemary makes a pleasant-tasting tea. Use one teaspoon of crushed dried leaves in a cup of boiling water and steep for ten minutes.

**Cosmetic use:** Extract that can have antioxidant benefit for the skin. Use an infusion as a rinse to lighten blond hair, and to condition and tone all hair. Try mixing an infusion half and half with shampoo to strengthen hair. An infusion can also be used as an invigorating toner and astringent. Rosemary added to a bath strengthens and refreshes, especially when used following an illness.

9. **Grapefruit essential oil:** It is the superb lymphatic stimulant action in grapefruit oil that helps to make it a favorite ingredient for any product that deals with excess water in the tissue. Apart from the diuretic effect it has in removing excess water, it boosts the general lymphatic operation in the skin; thereby prevent an occurrence of the same problem.

Apart from stimulating the lymphatic system, grapefruit essential oil is very effective in removing toxins from the body, making it ideal for the treatment of and to fight cellulite, as well as other toxic problems in the skin. At the same time it tones the skin and eases congestion in oily skins-making it helpful

in treating acne. Topical application of grapefruit oil may cause contact dermatitis or phototoxic reaction when skin is exposed to sunlight.

10. **Xanthan gum:** One of the most remarkable properties of xanthan gum is its ability to produce a large increase in the viscosity of a liquid by adding a very small quantity of gum, on the order of one percent. In most foods, it is used at 0.5%, and can be used in lower concentrations. The viscosity of xanthan gum solutions decreases with higher shear rates; this is called pseudoplasticity. This means that a mixing, shaking or even chewing, will thin out, but once the shear forces are removed, the food will thicken back up. A practical use would be in salad dressing: the xanthan gum makes it thick enough at rest in the bottle to keep the mixture fairly homogeneous, but the shear forces generated by shaking and pouring thins it, so it can be easily poured. When it exits the bottle, the shear forces are removed and it thickens back up, so it clings to the salad. Unlike other gums, it is very stable under a wide range of temperatures and pH.  
**Cosmetic use:** Used as a thickening agent.

11. **Capric acid:** Is a saturated fatty acid. Its formula is  $\text{CH}_3(\text{CH}_2)_8\text{COOH}$ . Salts and esters of decanoic acid are called decanoates. The term capric acid arises from the latin "capric" which pertains to goats due to their olfactory similarities. Decanoate salts and esters of various drugs are available. Since decanoic acid is a fatty acid, forming a salt or ester with a drug will increase its lipophilicity and its affinity for fatty tissue.  
**Cosmetic use:** It is used in organic synthesis and industrially in manufacture of perfumes, lubricants, greases, rubber, dyes, plastics, food additives and pharmaceuticals.

12. **Glycine:** A colorless, crystalline, sweet, water-soluble solid,  $\text{H}_2\text{NCH}_2\text{COOH}$ , the simplest amino acid: used chiefly in organic synthesis and biochemical research. Abbreviation: *GLY*; Symbol : *G*. Fundamental constituents of all protein found in the body, such : alanine, arginine, asparagines, aspartic acid cysteine cystine, glutamic acid, glutamine, glycine, histidine, isoleucine, leucine, methionine, phenylalanine, proline, serine, threonine, tryptophan, and valine. Some of these amino acids must be obtained from protein in the diet.

**Cosmetic use:** In skin care products, these types of ingredients act primarily as water-binding agents, and some have antioxidant properties and wound-healing abilities as well. However, these substances cannot affect, change, or rebuild wrinkles. Whether the protein in a skin-care product is derived from an animal or plant, the skin can't tell the difference.

13. **Xanthan Gum:** A water-soluble natural gum produced by the fermentation of sugar with certain microorganisms and used as a binder, extender, or stabilizer in foods and other products.

**Cosmetic use:** Used as a thickening agent.

14. **Mixed Tocopherol:** Tocopherols (TCP) are a class of chemical compounds of which many have vitamin E activity. It is a series of organic compounds consisting of various methylated phenols.

**Cosmetic use:** Tocopherol is considered an antioxidant superstar. Vitamin E is a lipid-soluble vitamin (meaning it likes fat better than water) that has eight different forms, of which some are known for being excellent antioxidants when applied topically to skin, particularly alpha tocopherol and the tocotrienols. However, other studies have indicated the acetate form (tocopherol acetate) is also bioavailable and protective for skin, and still other research points to tocopherol sorbate as providing significant antioxidant protection against ultraviolet radiation-induced oxidative damage. Vitamin E is the major naturally occurring lipid-soluble...antioxidant protecting skin from the adverse effects of oxidative stress including photo aging (sun damage). Many studies document that vitamin E occupies a central position as a highly efficient antioxidant, thereby; providing possibilities to decrease the frequency and severity of pathological event in the skin.

15. **Cyamopsis Tetragonaloba/Guar Gum:** The guar plant is an annual plant known as 'cyamopsis Tetragonaloba'. The important source of nutrition to human and animals is the legume, it regenerates soil nitrogen and the endosperm of guar seed is an important hydrocolloid widely used across a board spectrum of industries.

**Cosmetic use:** Plant-derived thickening agent.

16. **Helianthus annuus (sunflower ) seed oil:** Sunflower oil is the non-volatile oil expressed from sunflower (*Helianthus annuus*) seeds.  
**Cosmetic use:** Sunflower oil is commonly used in food as frying oil, and in cosmetic formulations as an emollient. Sunflower oil, like other oils, can retain moisture in the skin. It may also provide a protective barrier that resists infection in pre-term infants. Studies using sunflower oil have been conducted involving low birth weight pre-term infants that are often susceptible to infection due to their underdeveloped skin. The study determined that infants receiving a daily skin treatment of sunflower oil were 41% less likely to develop infections in hospital.
17. **Glyceryl Stearate:** An emulsifier that assists in forming neutral, stable emulsions. It is also a solvent, humectants, and consistency regulator in water-in-oil and oil-in-water formulations. Derived from palm kernel or soy oil.  
**Cosmetic use:** Used as an emollient and thickening agent for cosmetics.
18. **Jojoba Seed Oil (*Simmondsia Chinensis* Seed Oil):** A non-fragrant plant oil whose chemical composition is similar to human sebum (oil).  
**Cosmetic use:** Acts as a moisturizer and emollient agent to improve the skin elasticity and suppleness, containing natural tocopherols to minimize oxidation and lipid per oxidation. Research has shown that topical application of jojoba oil can reduce oil production in skin that's been irritated by drying acne treatments. Jojoba oil also has the ability to dissolve excess natural oil in the pore, allowing it to be washed away. For those with dry skin, jojoba oil is an excellent emollient to consider when shopping for moisturizers., Little is known about the antioxidant content of jojoba oil, so it is not preferred to antioxidant - rich plant oils such as olive or grape seed, However, it certainly has benefits for oily/acne-prone and dry skin that make it worth considering.
19. **Cetearyl Glucoside:** A compound of glucose and cetearyl alcohol. Cetearyl alcohol is from fatty alcohol's. Glucose occurs naturally in sugars. May be naturally derived.  
**Cosmetic use:** It helps skin and hair retain natural moisture and imparts a velvety feeling. Cetearyl Glucoside functions as an emulsifier.

20. **Pumice:** Pumice is widely used to make lightweight concrete or insulative low-density breeze blocks. When used as an additive for cement, a fine-grained version of pumice called pozzolan is mixed with lime to form a lightweight, smooth, plaster-like concrete. This form of concrete was used as far back as Roman times. Roman engineers used it to build the huge dome of the Pantheon and as construction material for many aqueducts.

**Cosmetic use:** It is also used as an abrasive, especially in polishes, pencil erasers, cosmetic exfoliants, and to produce stone-washed jeans. "Pumice Stones" are often used in beauty salons during the pedicure process to remove dry and excess skin from the bottom of the foot as well as calluses. It was also used in ancient Greek and Roman times to remove excess hair. Finely ground pumice is added to some toothpastes and heavy-duty hand cleaners (such as Lava Soap) as a mild abrasive.

21. **Citrus Medica Limonum (lemon) Peel Oil:** Potent skin sensitizer and irritant. Though it can have antibacterial properties, the irritation can hurt the skin's immune response.

**Cosmetic use:** Lemon peel essential oil acts as a natural astringent, antiseptic, and bactericide on the skin, which is of particular benefit to people with problem and acne skin. The rubefacient and diuretic properties are also used to bring balance to the fluids in the cells and ensuring optimum circulation - which is needed to remove cellulite.

22. **Citrus Aurantium Bergamia Fruit Oil:** The bergamot *Citrus Aurantium* subsp. *Bergamia* (Risso & Poit.) synonym (*Citrus bergamia* Risso) is the size of an orange, with a yellow color similar to a lemon, and has a peasant fragrance. The juice tastes less sour than lemon, but more bitter than grapefruit.

Because of the required weather conditions, citrus bergamot is only commercially grown in Calabria (Italy). Bergamot grows on small trees which blossom during the winter. The distinctive aroma of the bergamot is most commonly known for its use in Earl Grey tea, though the juice of the fruit has also been used in Calabrian indigenous medicine as an herbal remedy for malaria and its essential oil is popular in aromatherapy.

**Cosmetic use:** Bitter orange extract. It can have antioxidant properties when eaten however, used topically its methanol content makes it potentially irritating for skin. A volatile cutus oil that, when used topically is a

photosensitizer and has photomutagenic properties, meaning it can induce malignant changes to cells.

23. **Caviar Extract:** Capelin roe is also called masago caviar and is a member of the smelt/salmon family. Capelin caviar is still relatively new, very abundant and is easily accessible. Because of this Capelin Caviar is gaining popularity quickly. The Japanese have commonly been using Capelin caviar in their cuisine and is a popular topping for sushi. Caviar extract is described as combining a wealth of interactive minerals, vitamins, phospholipids, nucleic acids, water and trace elements. Caviar is a fully energetic ingredient that has been known and appreciated for hundreds of years for its rich nutritive components and high value.

**Cosmetic use:** Like human skin, caviar is roughly 50 to 70 percent water with a similar break-down of lipids and other trace elements. Because the cell format of caviar is similar to human skin, it is able to penetrate quickly, provide nutrients more effectively and yield faster results. The characteristic enables caviar to restore and support natural functions of the skin on a deeper, cellular level. Using Caviar in natural skin also offers proteins and the same amino acids found in collagen. These ingredients naturally stimulate collagen production and trigger an increase in the cellular metabolism, which helps to repair damaged skin and reduce superficial lines and wrinkles. The high levels of water in caviar leaves the skin well moisturized.

24. **Aloe barbadensis:** There is no real evidence that Aloe Vera helps the skin in any significant way. Topical application of Aloe Vera is not an effective preventative for radiation-induced injuries.....Whether it promotes wound healing is unclear....Even though there are some promising results, clinical effectiveness of oral or topical Aloe Vera is not sufficiently defined at present. There is research indicating that isolated components of Aloe Vera, such as glycoprotein, can have some effectiveness for wound healing and as an anti-irritant. Aloe Vera may also play a role in binding moisture and softness to the skin.

25. **Vanilla planifolia fruit extract:** Extract used primarily as a fragrance and flavoring agent. The vanilla plant is a source of catechins (also known as

polyphenols), which exhibit antioxidant activity and serve as anti-inflammatory agents.

26. **Hyaluronic acid:** A gellike aminoglycan that is found in the tissue space, the synovial fluid of joints, and the vitreous humor of the eyes and acts as a binding, binding, lubricating, and protective agent. The components used are referred to as natural moisturizing factor (NMF).

**Cosmetic use:** Natural Moisturizing Factor (NMF) is one of the primary elements in keeping skin healthy is making sure the structure of the epidermis (outer layer of skin) is intact. The components that do this are often called (NMF) or ingredients that mimic the structure and function of healthy skin. While the oil and fat components of skin prevent evaporation and provide lubrication to the surface of the skin, it is actually the intercellular matrix, along with the skin's lipid content, that gives skin a good deal of its surface texture and feel.

27. **Iceberg Water:** Iceberg water is born at the top of the World in the Artic Polar icecap, where one of the purest waters has been locked away for over 12,000 years. As ice breaks away from the glaciers, it follows the ocean current south and will eventually melt in the warmer waters. Drinking Iceberg water is one of the most environmentally conscious methods of meeting the world's increasing demand for clean fresh water. There are two very positive environmental impacts from the use of icebergs for the purposes of drinking or as an ingredient additive to foods and cosmetics.

It decreases human dependency on traditional watersheds, such as rivers and lakes, and therefore decreases human impact on these delicate and overstressed ecosystems.

It helps reduce rising sea levels, which have been caused by polar icecap melting.

Since most glacier ice was formed thousands of years ago from falling snow, and snow results from condensed water vapor in the atmosphere, the water from icebergs is quite pure. There are not likely to be pollutants in iceberg water since the ice was formed when the environment was virtually free of contaminates. Typically, the total dissolved solids and elements counts are among the lowest of any water on the planet today

**Icebergs are usually harvested through iceberg alley, an area of the northern coast of Newfoundland. It's here that the simplest, healthiest and finest water is frozen solid. It has been untouched by the pollutants and toxins. Once the water has been harvested, it goes through a rigorous filtration that ensures the water is one of the purest available.**

**The pH is important in Cosmetics because the surface of the skin has an acid mantle, which is made of a mixture of lipids, sebum, and sweat. This acid mantle has a pH of about 5.5, which is a slightly acidic pH. Cosmetics should also have a slightly acidic pH. Higher pH values tend to swell the skin and make it more permeable. High pH values, can be harmful to the skin, particularly if they are not controlled, making it easier for bacteria, microorganisms, and other harmful substances to enter the body. Cosmetics need to be at a more neutral pH for stability purposes.**

**Quality Iceberg water analysis: 0.1 Fluoride, 5.0 pH factor, 2.0 Calcium, 0.004 Magnesium, 0.10 Magnesium, 1.0 Potassium, 0.004 Zinc**

**Cosmetic use: Low pH rebalances skin. The earth's purest water. Can be safely used in a Lucas, steamer, and as a spritz. As an additive for the mixing of masques and compresses. A pure post treatment beverage. Client sees the difference in treatment immediately and feels better. Spa /Aesthetician is providing client with an innovative experience.**

- 28. Alchemilla Vulgaris Extract: Plant with antimicrobial properties. Its high tannin content can cause skin irritation.**

**Cosmetic use: The most important function of Lady's Mantle in skin care is the toning and binding effect it has on loose sagging skin, and the fact that it helps to prevent the destruction of the connective tissue, as well as protecting newly formed fibers.**

- 29. Trifolium pretense (clover): Erect to decumbent short-lived perennial having red-purple to pink flowers; the most commonly grown forage clover.**

**Cosmetic use: Can have antioxidant and anti-inflammatory properties. It is sold as an herbal supplement for relief of menopausal symptoms such as hot flashes. Red clover does contain high concentrations of four major isoflavones that have been shown to have estrogenic properties, however, in studies, red clover was found to be no better than a placebo for menopausal symptoms.**

30. **Butyrospermum parkii (shea butter):** A traditional food plant in Africa, this vegetable has potential to improve nutrition, boost food security, and foster rural development and support sustainable land care. Shea trees take approximately 31 years to reach maturity. A number of steps are required to process the seed and obtain shea butter. First, the outer pulp is removed. Second, the shea nut is shelled; historically, shelling is done by mortar and pestle or by crushing the shell with stones. In some instances, the Universal Nut Sheller may be an appropriate technology that sometimes reduces a significant amount of labor involved in shelling shea. Once shelled, the seed is then roasted and either ground down or pressed to extract the oils that make shea butter.
- Cosmetic use:** A plant lipid extracted from the karate tree that is used as an emollient in cosmetics.
- Shea butter is a rich source of antioxidants, including epicatechin gallate, gallicocatechin, epigallocatechin gallate, and epigallocatechin gallate-as well as quercetin.
31. **Corn Silk Extract:** The genus name *Zea* Means "cause of life", and the species name "mays" means "mother". Corn Silk has been used in conditions of high uric acid such as gout and some types of arthritis. Derived from the dried silky tassels found inside the husks of corn, Corn Silk contains iron, silica, potassium and vitamins B, C and K. It also contains moderate amounts of zinc, calcium, magnesium, and phosphorus. Its key constituents are considered to be maizenic acid, fixed oil, resin and mucilage.
- Cosmetic use:** Used for its soothing properties, helps in relieving dry cracked skin.
32. **Satureja hortensis L./Satureja Montana L.:** Summer/winter savory , family: Lamiaceae (mints) is found throughout many parts of the world. Because the flavor of summer savory is somewhat sweeter than that of winter savory, summer savory is used almost exclusively in commerce. The green leaves and stems, both fresh and dried, along with extracts, are used as flavors in the baking and food industries. Both summer and winter savory have a history of use in traditional medicine as tonics, carminatives, astringents and expectorants. Dried summer contains approximately 1% - 1.6% of a volatile

oil composed primarily of carvacrol, thymol, and monoterpene hydrocarbons such as beta-pinene, p-cymene, limonene, and camphene. The leaves contain a variety of minor components including minerals and vitamins.

**Cosmetic use:** Used as an antioxidant, antifungal, astringent, antiseptic properties.

33. **Grape seed oil (Vitis Vinifera oil):** Grape seed oil (also called grapeseed oil or grape oil) is a vegetable oil pressed from the seeds of various varieties of Vitis vinifera grapes, an abundant by-product of winemaking. Grape seed oil is used for salad dressings, marinades, deep frying, flavored oils, baking, massage oil, sunburn repair lotion, hair products, body hygiene creams, lip balm and hand creams. Most grape seed oil is produced in Italy.  
**Cosmetic use:** Emollient oil that also has good antioxidant properties.
34. **Lecithin:** Phospholipid found in egg yolks and the membranes of plant and animal cells. It is widely used in cosmetics as an emollient and water-binding agent.
35. **Avocado oil (Persea gratissima oil):** Emollient oil similar to other nonfragrant plant oils. It has antioxidant properties.  
**Cosmetic use:** Avocado oil is one of the natural oils that is the most easily absorbed by the skin and transported deep into the tissue. It's wonderful emollient and hydrating properties makes it ideal for dry, dehydrated or mature skins. Furthermore, it also helps to relieve the dryness and itching of psoriasis and eczema.
36. **Caprylic/Capric Triglyceride:** A mixed triester of caprylic and capric acids, is a highly refined medium chain triglyceride (MCT) oil possessing excellent oxidation stability with an almost indefinite shelf life. CCT is a desirable emollient with quick skin penetration and has no color, odor or taste. Great as a dispersing agent and useful as a solvent for vitamins and actives. Excellent as a superfatting oil in soapmaking and improves spreading of skincare formulas. Used in massage, it will not stain sheets. Also called Fractionated Coconut Oil. Cosmetic grade.

37. **Moor Mud:** A therapeutic mud and is the original "organic" spa product with 30,000 years union of nature and time. Moor has a long history of being valued for skin care and health care dating back to the ancient Greeks & Romans. A few of the distinctive characteristics of the Golden Moor mud are that it is hydro soluble and liposoluble. It also has a high content of humic acid, salicylic acid, phytohormones as well as a variety of decomposed plant matter.
38. **Golden Moor professionals developed innovative formulations using finely mulled colloidal and botanical ingredients in moor that retained the natural active benefits. These benefits includes: skin healing and protections, reduction of inflammation and pain, removal of toxins and the absorption of nutrients, natural essential hormones necessary for glandular balance, and the different moisturizing properties of moor mud help maintain skin barrier integrity, prevent dehydration and alleviate skin disorders. It acts as a natural astringent, absorbent, ion exchanger, hormone balancer, anti-inflammatory and cell regenerator.**
39. **Rosa Canina:** The plant is high in certain antioxidants. The fruit is noted for its high vitamin C level and is used to make syrup, tea and marmalade. It has been grown or encouraged in the wild for the production of vitamin C, from its fruit (often as rose-hip syrup), especially during conditions of scarcity or during wartime. The species has also been introduced to other temperate latitudes. During World War 11 in the United States Rosa canina was planted in victory gardens, and can still be found growing throughout the United States, including roadsides, and in wet, sandy areas up and down coastlines.
40. **Birch:** Family: Betulaceae/ Genus and specie: Betula alba (synonym B. pendula) Birch is a popular remedy in Sibeia and Russia for treating arthritis, while the wood also has commercial applications. The bark is used for tanning leather and the twigs are used for making brooms. It is also known as paper birch, white and canoe birch. The sap is fermented to make beer, wine, spirits and vinegar.

41. The genus contains about 60 species of deciduous trees and shrubs and are distributed throughout the northern hemisphere. It has drooping branches and peeling bark and grown about 10 -25 meters in height. The leaves and bark are used and the sap is of major commercial importance in herbal cosmetics.

42. Birch is a bitter astringent tonic herb that has diuretic and laxative properties, while reducing inflammation, relieving pain and also increasing perspiration. It contains flavonoid glycosides with hyperoside and quercitrin as the main compounds. It also contains methyl esters, phenylpropanoids, steroidal saponins, methylsalicylate and resin.  
Cosmetic use: Birch sap is used with great success to help with psoriasis and eczema. The astringent effect of the sap also helps to tone the skin and has a positive effect on increasing skin elasticity. In hair care products, it is most useful to combat oily and greasy hair, and also acts as a general conditioner to the hair. Birch bark powder used topically will also help as a great relief for psoriasis,eczema, minor skin eruptions and rashes.

43. **Whelk Shell:** Family: *Buccinum undatum*. Common names: Rough or wave whelk, northern whelk, buckie, conchs, coo coos. Whelk is biologically classified as a gastropod mollusk of the family Buccinidae. This large predatory marine snail is characterized by a thick, spirally, coiled, shell and a large muscular foot. The under surface of the foot is lubricated with a slime substance, allowing the organism to travel over the ocean bottom. The shell has 6 to 8 whorls with spiral ridges and is typically chalky grey to grey-yellow in colour with irregular light and dark segments.  
The entrance to the shell is oval in shape and can be sealed by a hard plate called the operculum, which is attached to the top of the foot. The soft body of the whelk is normally white or cream colour with black streaks or spots.  
The Geographic range of the whelk in the North Atlantic Ocean extends from the Mediterranean Sea to Scandinavia on the eastern side and from Labrador to New Jersey on the western side, with reported pockets of high density in the Gulf of St. Lawrence and the Bay of Fundy. Whelk is considered a cold water species that inhabits a wide range of bottom types, however it prefers muddy or sandy substrates and can be found anywhere from tidal level to depths of 200m or

more. In Newfoundland and Labrador, whelk is located in numerous areas along the coast, particularly around southern Labrador and the northern coastlines of the island.

**Cosmetic Use:** Milled powdered Whelk shell is full of protein and is used as an exfoliant to help in the removal of dead skin cells.

44. **The Operculum foot:** is used to make an extract for its high concentration of collagen, this extract is that of a protein but a very special one. Its structure is made up of amino acids with fibrous arrangement, otherwise known as fibrous scleroproteins. The fibers are long chain molecules, containing up to 19 amino acids. The most important of these being, prolin, glicyn and hydroxyprolin and hydroxyprolin and hydroxysilizin. The last two compounds are not found in any other proteins.

**Cosmetic use:** Its collagen or the lack of it that is responsible for the deterioration of your skin. Collagen functions as scaffolding for the body. It is the fibrous protein constituent of skin, caetilage, bones and other connective tissue. An appropriate and enough collagen supply in our body loses collagen at a rate of 1.5% per annum, starting at the age of 25. Collagen functions as a chondroprotective agent, which means that it protects cartilage and synovial fluid against degeneration. The depletion of collagen in our skin leads to the formation of wrinkles and the occurrence of other signs of aging.

45. **Hippophae rhannoides:** Sea buckthorn is a hardy, deciduous shrub which thrives in moist soils and can tolerate cold and extreme conditions. The thorny branches make harvesting challenging by holding the deep golden berries tight. Sea buckthorn was used for centuries as a staple food and to cure everything from arthritis to skin disorders. Modern medicine looks to sea buckthorn for its antibiotic, anti-inflammatory and analgesic properties. Nutritionally sea buckthorn is a good source of vitamins C and E, beta carotene, flavinoids and essential fatty acids.

**Cosmetic use:** Sea buckthorn can be found in sunscreen and has been used to help treat skin damage due to radiation from x-rays and sun exposure. Acne, pigmentation problems, and wound healing also may benefit from sea buckthorn.

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