

EST 17B

29 April 2023

Esthetician – Skin Care Technician
Advanced Facials

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Advanced Facials

Rationale

Why is it important to learn this skill?

An effective and safe advanced facial using machines and chemicals can only be performed by a trained and educated esthetician.

Outcome

When you have completed this module, you will be able to:

Understand the dangers, proper use of machines, tools, products, and perform a specialized facial.

Objectives

1. Describe manufacturer's specifications.
2. Describe electric machines to enhance the facial results.
3. Demonstrate a specialized facial.

Introduction

Specialized facials often address a client's challenging skin problems. Usually, the client is having some difficulty such as adolescent acne, matured acne, acne vulgaris, scarring from acne, rosacea, skin discoloration, enlarged pores, aging skin, excessive oil, etc. These conditions can be treated with specialty equipment and products which can be harmful to a client's skin; therefore, the esthetician must be properly trained and educated. This service, when properly performed, is beneficial, safe, non-invasive, and pain-free.

There are two types of specialized facials: 1) facials with machines, and 2) chemical facials. Machine facials are usually more intense than the basic manual facial. Because of the intensity, they should be used with caution, as some of these machines can pull or tear at the skin. Most specialized facials are performed as executive treatments; they can occur at various intervals, ranging from a couple of times a week, to once a week, or once every few weeks. Intervals will depend on many factors including cost, skin

conditions, the length of time that a treatment will last, and the time that it takes for the skin to safely undergo another machine facial.

Chemical facials are a form of manual facial that requires special knowledge and skills to perform. The purpose of a chemical facial is to help diminish fine lines, minimize large pores, and eliminate scarring by a process of burning the epidermis stratum corneum layer of the skin. This process helps the skin to initiate mitosis (division of the cell to create fresh new cells).

Chemicals used for facials can burn the skin if not monitored, and may result in scarring. A patch test should always be performed before a chemical facial is booked.

Objective One

When you have completed this objective, you will be able to:

Describe manufacturer's specifications.

Skincare products are extremely popular, and they have been for centuries. Most North American women use around twelve personal care products in a single day; each of these products contains an array of chemicals, both naturally occurring and human made. It is crucial for an esthetician to understand products, chemicals, and the effects of these chemicals. With a thorough understanding, an esthetician can make informed, responsible choices for themselves and their clients.

Canada's *Food and Drugs Act* is the overarching legislation that applies to estheticians. The *Act* is accompanied by the *Food and Drugs Regulations* which provide for enforcement of the *Act*. The *Food and Drugs Act* (formal title "*An Act respecting food, drugs, cosmetics and therapeutic devices*") is an act of the Parliament of Canada regarding the production, import, export, transport across provinces and sale of food, drugs, contraceptive devices and cosmetics (including personal cleaning products such as soap and toothpaste). Consult with the federal government regarding products and their ingredients. Because the skin can absorb up to 60% of the chemicals in products, it is imperative to stay informed. Chemicals that enter through the skin can move into the bloodstream or gather in other tissues, cells, or organs. Even a small amount of product applied to the skin can have long-term health consequences.

Additional information can be found in *The SCCS Notes of Guidance for the Testing of Cosmetic Ingredients and their Safety Evaluation, 9th Revision* (29 September 2015). The following is an excerpt from the introduction:

"This document is compiled by the members of the Scientific Committee on Consumer Safety. The document contains relevant information on the different aspects of testing and safety evaluation of cosmetic substances in Europe. The emphasis of this guidance is on cosmetic ingredients, although some guidance is also given for the safety assessment of finished products. It is designed to provide guidance to public authorities and to the cosmetic industry in order to improve harmonised compliance with the current cosmetic EU legislation."

The rest of this *Objective* contains a partial list of some of the common products and chemicals used by estheticians.

Surfactants

Surfactants are compounds that lower the [surface tension](#) between two liquids, between a gas and a liquid, or between a liquid and a solid. Surfactants are usually [organic compounds](#) that contain both a water-insoluble (or oil-soluble) component and a water-soluble component. Surfactants will diffuse in water and [adsorb](#) at [interfaces](#) between air and water or at the interface between oil and water, in the case where water is mixed with oil. The water-insoluble hydrophobic group may extend out of the bulk water phase, into the air or into the oil phase, while the water-soluble head group remains in the water phase. In the esthetics trade, surfactants are often used as emulsifiers, conditioning agents, and solubilizers.

Emulsions are mixes of oils and water that are semi-stable and do not separate out into their oil and water layers. A surfactant acting as an emulsifier allows the emulsion to have this well-blended quality. Examples of emulsions are moisturizing creams and lotions. Consumers generally prefer moisturizers to be of uniform texture as opposed to layers of oil and water or just the oil itself. When applied to the skin, the oils are delivered to the skin surface.

Conditioning agents include leave-on skin and hair-care products such as hair conditioners. After using a hair conditioner, the product remains on the hair, giving it a smooth feel due to the lipophilic (oily) portion of the molecule.

Surfactants may be used as solubilizers when attempting to try to blend a small amount of oil into a large quantity of water. An example of products that incorporate solubilizers include colognes, perfumes, and skin toners.

The most common Surfactants found in personal care products, are the sulfated detergents:

Sodium lauryl sulfate	Ammonium laureth sulfate	Disodium lauryl sulfosuccinate
Cocamphocarboxyglycinate	Cocoamidopropyl betaine	Alpha-Olefin sulfonate

Alcohol

Some forms of alcohol are used as drying agents. These alcohols include: Ethanol, SD alcohol, Methanol, Denatured alcohol, Ethyl Alcohol. Prolonged usage of alcohol will leave the skin dry and flake as it eats away at the skin surface. This unnecessary stress on the skin will lead to the interruption of the skin renewal cycle, hence resulting in an extremely unhealthy skin condition. When alcohol is used to prevent acne, it usually results in worsening the condition.

To ensure a smooth finish to a product, manufacturers often utilize alcohol as a solvent to mix different ingredients together. The low evaporation point of alcohol also makes it particularly useful in certain cosmetics that require drying fast.

Despite its many negative effects, alcohol does help the skin to absorb products better, which is why it is used in some creams and lotions. Alcohols derived from natural fats and oils are better for the skin. People with sensitive skin should still be wary of any alcohol based products.

Benzyl Alcohol

Benzyl alcohol is generally combined with acetic acid to better combat yeasts and moulds. Benzyl alcohol is usually used at up to 1.0% and acetic acid (anhydrous) up to 0.6%. This combination is safest at a pH of between 3 and 5.

BHA and BHT

BHA (butylated hydroxyanisole) and BHT (butylated hydroxytoluene) are used as preservatives in many foods, cosmetic products, and drugs. In cosmetics, these ingredients are found mainly in shampoos, deodorants, body lotions and make-up, usually at a concentration of 0.1% or less.

BHA and BHT play an important part in maintaining the quality and safety of products, and help to extend shelf life. BHA was evaluated under the Government of Canada's [Chemicals Management Plan](#) and was found to not present a risk at current levels of exposure.

Coal Tar Dyes

Coal tar dyes are colour ingredients that were originally made from chemicals extracted from coal tar, and the distillation process was not 100% effective, so harmful impurities were often left in the product.

Although the coal tar dyes in use today are no longer made from coal tar, but made synthetically, the name has stuck. These ingredients have a high level of quality and purity, as they undergo a refining process to remove any unacceptable impurities. Some coal tar dyes, like [para-phenylenediamine \(also known as PPD\)](#), and others used in oxidative hair dyes still pose a health risk because they are known sensitizers when used on the skin (they cause allergic reactions upon repeat exposure).

Coal tar can treat itching, scaling and flaking caused by psoriasis or seborrheic dermatitis. The proposed mechanism is the interference of the C-fibre nerve transmission of substance P. Substance P is a generalized cytokine that researchers associated with any anti-inflammatory condition, especially in the case of the skin. Coal tar belongs to the group of drugs known as the keratoplastics class. It works by causing the skin to shed dead cells and by slowing down the growth of skin cells.

According to the research, coal tar may irritate, redden or dry the skin.

Diethanolamine (DEA) and Other Ethanolamines

Diethanolamine (DEA) is unacceptable for use in cosmetics in Canada. This is because DEA and similar compounds like diisopropanolamine (DIPA) can form harmful nitrosamines (known carcinogens) upon reacting with nitrosating agents found in the cosmetic formulation or airborne nitrogen oxides. DEA and DIPA, along with any ingredients that can cause the formation of nitrosamines, when included in a cosmetic, may cause injury to the user, and should not be present in cosmetics sold in Canada. This is reflected in the [Cosmetic Ingredient Hotlist](#).

Cocamide DEA, Cocamide DIPA and other fatty acid ethanolamines are currently permitted for use in cosmetics as they do not have the same nitrosamine-forming potential as DEA on its own. However, to mitigate the risk associated with the potential presence of DEA impurities, their use in combination with nitrosamine-forming agents is unacceptable for cosmetics. Triethanolamine (TEA), diethanolamine

(DEA) and monoethanolamine (MEA) (in rinse-off formulations only) are acceptable for use in cosmetics that are formulated to be non-irritating as long as they are not used in combination with nitrosating agents, as this may give rise to carcinogenic nitrosamines.

Diethylhexyl Phthalate (DEHP)

Diethylhexyl phthalate (DEHP) was [assessed by the Government of Canada](#), and was deemed that DEHP “may enter the environment in a quantity or concentration or under conditions that may constitute a danger in Canada to human health.” While the phthalate DEHP has not been notified in any cosmetics with Health Canada, it is used in other countries as a cosmetic ingredient. It was added to the [Cosmetic Ingredient Hotlist](#) to communicate to manufacturers that it should not be used in cosmetic products.

As part of the chemical grouping initiative, under the CMP, the Government of Canada will be evaluating 14 substances which are part of the phthalate substance grouping. Fourteen additional substances are under consideration to be included in the grouping as well. The draft screening assessment is anticipated for release in 2016.

Formaldehyde (and Formaldehyde-releasing preservatives)

Formaldehyde is used in small amounts in hair and skin cosmetics as a preservative, to maintain the integrity of the product and prevent growth of microorganisms. Formaldehyde is a gas, but in liquid form, it is referred to as “formaldehyde”, “methylene glycol” or “formalin”. Formaldehyde-releasing ingredients slowly release very small amounts of formaldehyde to act as a preservative for the product or as a denaturant in the case of hair straightening products. Formaldehyde use has declined in recent years. When inhaled at high levels, however, formaldehyde is anticipated to be a human carcinogen.

Health Canada has reviewed the scientific information available on formaldehyde and considers formaldehyde to be safe when used in small concentrations on the skin. It is permitted at a concentration of 5% or less in nail hardeners but should carry cautionary labels and directions for safe use to indicate the potential to cause skin sensitivity. Formaldehyde is also permitted in oral cosmetics at a concentration of 0.1% or less and at a concentration of 0.2% or less in non-oral cosmetics as a

preservative only. These are the lowest possible amounts that still have an effective anti-microbial effect. However, because formaldehyde may cause sensitivity in some individuals, Health Canada concluded that formaldehyde is not permitted in aerosol cosmetics due to inhalation hazards.

After reviewing new scientific data, a new limit has been added to the *Cosmetic Ingredient Hotlist* to address health concerns with the inhalation of formaldehyde in non-aerosol cosmetics that release formaldehyde vapours when used according to the directions of use. Hair straightening products that are intended to undergo forced convection (for example, blow-drying) and/or heating (for example flat-ironing), processes which cause formaldehyde vapours to be created and released, must not contain formaldehyde at concentrations of more than 0.01%.

Commonly used formaldehyde-releasers to avoid are:

Imidazolidinyl urea	Diazolidinyl urea	Bronopol
5-Bromo-5-nitro-1,3-dioxane	DMDM hydration	Quaternium-15
Sodium hydroxymethylglycinate		

Fragrance/Parfum Ingredients

Health Canada reviews fragrance ingredients like all other cosmetic ingredients. If a fragrance ingredient is found to be unsafe for use in cosmetics, it cannot be used in cosmetics sold in Canada, as per the law. Cosmetic ingredients that Health Canada determines may cause injury are reflected on the [Cosmetic Ingredient Hotlist](#).

Canada uses the international naming convention for cosmetics, called "International Nomenclature for Cosmetic Ingredients" (INCI). Under this naming convention, components of a fragrance can be listed as individual ingredients or can be listed under the term "parfum" (in the E.U. and Canada) or "fragrance" (in the U.S.).

The fragrance industry is predominantly self-regulating. Most global fragrance suppliers are members of the [International Fragrance Association](#) (IFRA). IFRA develops and implements a Code of Practice and safety standards used worldwide to protect the consumer and the environment.

IFRA's standards for use and restrictions on fragrance ingredients are based on safety assessments by the Research Institute for Fragrance Materials (RIFM). RIFM is an independent non-profit institute that evaluates safety data on fragrance ingredients. RIFM's Panel of Experts is made up of toxicologists, pharmacologists and dermatologists who have no commercial ties to the fragrance industry. RIFM publishes its findings and conclusions in a peer-reviewed and accredited scientific journal.

Hydroquinone

Hydroquinone is an aromatic compound in skincare products that acts as a skin lightening agent. It bleaches the skin and can be helpful in the treatment of different forms of hyperpigmentation, including: acne scars, age spots, freckles, melisma, and post-inflammatory marks from psoriasis and eczema. Hydroquinone works by decreasing the number of melanocytes present.

Alternative natural skin-lightening products are available. These include:

Antioxidants. Vitamins A and C in anti-aging products help brighten the skin and improve the overall skin tone. When used over time, antioxidants may also help in hyperpigmentation.

Plant-based acids such as kojic acid or ellagic acid. These work by slowing down the skin's melanin production.

Vitamin B3. Generally labelled as "niacinamide," this ingredient has the potential to prevent darker areas of pigmentation from rising to the surface of the skin.

Oxybenzone

Oxybenzone (benzophenone-3 or BP-3) is an organic compound that is useful in stabilizing and strengthening the colour and scent of skincare products, but its most important use is in the form of sunblock. It absorbs UV Beta and UV Alpha rays and is common in regular lotion sunscreens and makeup foundations with an SPF. It easily dissolves into lotions and creams, producing an easily absorbed product which protects the skin from the sun.

Unfortunately, the debate about the safe use of oxybenzone is still ongoing. One of the biggest concerns in the medical community about the widespread use of the compound comes from the fact that the body easily absorbs it. This absorption raises concerns that oxybenzone may accumulate in the body, eventually leading to potentially toxic levels which may affect the endocrine system.

Safe alternatives of oxybenzone include non-nano zinc oxide or Non-nano titanium dioxide.

Parabens

Parabens are used as preservatives in many cosmetic and personal care products, including make-up, moisturizers, hair care products and shaving products. They are generally used at concentrations of 0.5% or less. All commercially used parabens are synthetically produced, although some parabens also occur naturally as preservatives in certain fruits (for example, blueberries and carrots).

Parabens have been found to weakly mimic estrogens in in vitro studies and some, but not all, parabens have been found to have effects on the development of the male reproductive system in animal studies. While this raises a concern, there is currently no clear evidence that, at current levels of use in cosmetics, parabens cause similar effects in humans. In 2008, the U.S. Cosmetic Ingredient Review Expert Panel concluded that parabens are "safe as used" in cosmetics. In 2012 the Panel re-examined its previously published safety assessment of parabens and reaffirmed the safety of parabens as preservatives in the present practices of use and concentration in cosmetics. The European Union's Scientific Committee on Consumer Safety has published multiple opinions on parabens that state the use of some parabens in cosmetics is safe, within limits.

Health Canada is currently conducting an assessment of parabens in all uses, to be published as a draft in Summer 2019.

Alternatives to parabens are: phenoxyethanol, sodium benzoate, benzoic acid and benzyl alcohol.

Para-Phenylenediamine (PPD)

Para-phenylenediamine (PPD) is a coal tar dye commonly used in permanent and semi-permanent hair dyes, colours and tints. It is used with oxidizing agents like hydrogen peroxide to create colourant molecules. Hair colouring products have been used all over the world for decades with very few reports of adverse effects. However, PPD is known to be a sensitizer when used on the skin (causes allergic reactions upon repeat exposure in some people), and a certain number of Canadians experience adverse allergic reactions to the ingredient. For this reason, the [Cosmetic Regulations](#) require cautionary statements and specific directions of use on the labels of all hair dyes containing PPD or other coal tar dyes. This is also specified in the Cosmetic Ingredient Hotlist. The labels must warn people that the product has the ability to cause skin sensitivity in some individuals and that a “patch test” should be done before using the product. Also, people are warned not to use the dye on eyebrows and eyelashes. Eyelash and eyebrow tinting should only be done by a professional.

PPD and other dye constituents are acceptable for use only in oxidative hair dyes at specific concentrations. Adverse reactions to this ingredient in hair dyes are rare when used as directed. This is because the oils on the scalp give some protection from the dye, and the product is rinsed off after no more than 30 minutes of use.

Both the European Union and U.S. have studied the use of PPD and found it is safe for use in hair dyes at the current concentrations by people who are not sensitive. They place similar restrictions as Canada on the use of PPD in hair dyes with cautions on the label.

The use of PPD on the skin in cosmetic products like black henna tattoos is unsafe because when applied to the skin, PPD can be a strong sensitizer.

PEG Compounds

PEG, or poly(ethylene glycol) compounds are used to make non-ionic surfactants (surfactants allow for easier spreading of cosmetics, among other purposes). There are hundreds of different types of PEG compounds used in cosmetics. PEGs have low oral (taken by mouth) and dermal (used on the skin) toxicity. The U.S. Cosmetic Ingredient Review Expert Panel found that cosmetics containing PEGs should not be used on

compromised skin (such as skin that is broken or has a rash), but there was no evidence of problems with healthy, intact skin. The final safety assessment, in 2012, of Alkyl PEG Sulfosuccinates and other PEG related compounds confirmed that these compounds are safe as used in cosmetic products, when formulated to be non-irritating.

Currently, there are no restrictions or prohibitions on cosmetic PEG compounds in Canada, the European Union, or the U.S.

Small amounts of 1,4 dioxane, a by-product of ethoxylation, may be found in PEG and Sodium Lauryl Sulfate (SLS) ingredients. Exposure to high levels of 1,4 dioxane is linked to kidney and liver damage, and to cancer in some laboratory animals. The potential presence of dioxane in this material is well known, and can be controlled through purification steps. Dioxane exposure via cosmetic products was evaluated in Canada's [Chemicals Management Plan](#) and found to be safe. Health Canada advises industry to follow the recommendations set out by the U.S. FDA. If a product was found to have unacceptable levels of this impurity, Health Canada would take action to remove the product from sale.

Petrolatum

Petrolatum is a petroleum-based chemical. It is also commonly known as petroleum jelly. Petrolatum is a rich emollient and skin protectant. It is an effective ingredient for dry skin. It is found in consumer products like cosmetics and personal care items.

These include:

- lip balms
- moisturizers
- hair care products
- baby care products

A pure form of petrolatum is Vaseline. Health Canada states: "We assessed the health and environmental risks of petrolatum through a [chemical risk assessment](#). We looked at whether it is safe in:

- products used as intended
- the amounts used in consumer products

Our assessment shows that petrolatum is not harmful to our health at current levels of exposure." Alternatives to petrolatum include:

- Wixelene. This product feels like Vaseline, but contains soy oil, beeswax, and vitamin E.
- Alba UN Petroleum. This product also contains coconut oil.
- Beauty Raw Coconut Cream. This product contains living enzymes and nutrients from coconut oil.
- Jao Brand Goe Oil: This is not like your average Vaseline-type ointment. It looks and feels similar but contains oils and butters.

Phenoxyethanol

Phenoxyethanol found in the EU can reach a concentration of up to 1.0% in all product categories. The SCCS recently re-confirmed that it is safe for use and no regulatory uncertainty is identified at mid to long term. It has the advantage of being inexpensive.

Phthalates

Phthalates are used in cosmetics as plasticizers (to keep nail polish supple), perfume solvents, fixatives, and antifoam ingredients. Many scientific reviews in Canada, the U.S. and the E.U. have shown that the phthalates most commonly used in cosmetics (DEP—diethyl phthalate and to a lesser extent, DBP—dibutyl phthalate) are safe at the levels at which they are currently used in cosmetics. Available studies looked at the typical routes of exposure through normal use of cosmetics (skin absorption and inhalation).

- In 2007, the Scientific Committee on Consumer Products (the European Union’s top scientific body) published its opinion on phthalates in cosmetic products. DEP in cosmetics was found to be safe at current levels of use. DBP however, is prohibited for use in cosmetic products in the European Union.
- The European Chemicals Bureau completed an in-depth risk assessment on DEP in 2004. In addition to a thorough evaluation of toxicity, the Bureau assessed exposure to DBP from cosmetics, focussing on nail polish in particular. The risk assessment found that there was no need for further risk reduction measures for consumers.
- In 2011, the Government of Canada published a study on concentrations and possible dermal exposure of [phthalates](#) in cosmetics and personal care products, in which it concluded: “that only DEP and DBP are present in significant quantity in

cosmetic products. The overall exposure to phthalates from the use of cosmetic and personal care products was low and therefore unlikely to pose health risks to Canadian consumers”.

- In 2004, Koo et. al. estimated exposure (inhalation and dermal) to phthalates in cosmetics and concluded that estimated exposure is relatively small.

Alternatives to phthalates include:

Diethyl Phthalate (CAS 84-66-2) which is useful as a solvent and a fixative in fragrances as the alternative to diethyl phthalate in personal care products.

Di Propylene Glycol is an excellent, inexpensive and odourless alternative. It is a better solvent than propylene glycol.

Isopropyl Myristate, and Benzyl Benzoate

Siloxanes

Cyclomethicone and siloxanes are used in cosmetics to soften, smooth, and moisten. Siloxanes are found in the vast majority of hair care and skin conditioning products on the market and leave hair and skin with a soft and silky feeling. Disclosure of ingredients on product labels of cosmetics is mandatory in Canada. Among the ways you can identify siloxanes in cosmetics is by looking for the term “siloxane” or “cyclomethicone” in the ingredient list.

Siloxanes were evaluated for risks to human and environmental health under the [Chemicals Management Plan](#). An analysis of exposure through cosmetic products showed that the substances do not present a risk to human health as currently used. After reviewing information on bioaccumulation of certain siloxanes, the Government of Canada concluded that Siloxane D5 and D6 are not harmful to human health. However, Siloxane D4 may cause harm to the environment or its biological diversity. The Government of Canada is developing measures to control the potential risks posed by Siloxane D4. Environment Canada will review and consider the development of additional risk management controls for Siloxane D4, if required, as more information becomes available.

Sodium Benzoate

Sodium benzoate (and benzoic acid), in combination with potassium sorbate, is also an alternative to parabens. Both ingredients are inexpensive. Sodium benzoate can be found in:

2.5% in rinse-off products

1.7% in oral care products

0.5% in leave-on products

0.06% and above is effective against yeasts and moulds

Sodium Lauryl Sulphate / Sodium Lauryl Sulfate (SLS)

Sodium lauryl sulphate is a human-made, versatile surfactant used in cosmetics, pesticides, and detergents. SLS consists of non-volatile alcohols. In the esthetics industry, SLS is specifically used in products such as: skin-conditioning agents, emulsifiers, and solvents. As an emulsifier, it helps to stabilize and thicken solutions with ingredients of differing solubility. This allows products to achieve a more uniform viscosity for easier and smoother application. SLS is also used to makes bubbles, allowing a product to cut through oil and residue leaving skin feeling clean.

Sodium lauryl sulphate can be found in nature, in the flesh of coconuts; it can be refined in many grades of varying quality. SLS can also be created by combining decyl glucoside, sodium cocoyl isethionate, and sodium cocoyl glutamate. These four ingredients are then mixed with sulphuric acid reaction and lastly sodium hydroxide. This form of SLS reacts with the natural sebum in the skin and clogs the pores. It can also irritate and cause a burning sensation on the skin, especially for those who are prone to acne and those with sensitive skin. Alternatives to sodium lauryl sulphate include:

Ingredients that contain vitamin E	Allantoin
Ingredients with antiseptic properties	Hydrolyzed wheat benzoic acid
Anti-inflammatory ingredients	Benzyl benzoate

Triclosan

Triclosan is used in cosmetics as a preservative to prevent or slow down microbial growth and protect products from spoilage. This ingredient is also used in over-the-counter drugs and other consumer products. Health Canada considers triclosan to be safe when used in cosmetics at a concentration of up to 0.03% in mouthwashes and 0.3% in other cosmetic products like soaps (see the [Cosmetic Ingredient Hotlist](#) for more details about triclosan limits). These cosmetic limits are consistent with those of the European Union, which allows triclosan in cosmetic products at 0.3% as a preservative.

The Government of Canada has completed the assessment of triclosan as part of the [Chemicals Management Plan](#). The review concluded that triclosan is not harmful to human health but can cause harm to the environment when used in significant amounts. This preliminary assessment confirms that Canadians can continue to safely use products such as toothpaste, shampoo and soap containing triclosan.

Objective One Self-Test

1) What are surfactants used for in emulsions?

2) Is it safe to use formaldehyde in small amounts in hair and skin cosmetics?

3) What is the main use of parabens in cosmetics?

4) List some common items that might contain petrolatum:

Objective One Self-Test Answers

- 1) Surfactants are used to allow the oil and water in an emulsion to stay mixed in a semi-stable state and not to separate.
- 2) Yes, in small amounts.
- 3) Parabens are mainly used as preservatives.
- 4) Lip balm, moisturizers, hair care products, and baby products.

Objective Two

When you have completed this objective, you will be able to:

Describe electric machines to enhance the facial results.

High Frequency Facials

The high frequency facial is a skin care treatment to help treat and prevent stubborn acne, shrink enlarged pores, reduce the appearance of fine lines, decongest puffy eyes, fade dark eye circles, rejuvenate the condition of the scalp and nourish hair follicles for healthier hair growth.

High frequency has been shown to stimulate cell renewal and improve skin care product penetration and absorption by gently warming the tissues of the skin.

The safe, gentle oscillating and oxygenating power of high frequency electrical current has been shown to enhance blood circulation, increase collagen and elastin production, eliminate toxins and acne-causing bacteria, encourage lymphatic drainage, exfoliate dead skin cells and improve skin care product absorption. The primary action of high frequency current is thermal (heat producing) and is characterized by a high rate of oscillation. Due to its rapid rate of oscillation, high frequency does not cause muscular contractions - instead, it works on the principle of skin toning.

Operation

High frequency facial machines vary in design and appearance; however the underlying principle, technology, and operational functions are virtually the same. Most machines operate at a frequency of 100,000-2500,000+ Hertz.

High frequency facial machines work in conjunction with high frequency electrodes. The electrodes are made of clear tempered glass and come in a variety different shapes and sizes to facilitate the treatment of various contours of the face and body. When the high frequency electrode is firmly inserted into the high frequency hand piece, a gentle alternating electrical current is generated by the high frequency machine which then passes through the attached glass electrode upon contact with the skin. This contact ignites the inert gas within the electrode which produces healing electrical light energy and unstable oxygen which instantly converts into purifying ozone. In other words, when mixed with the air outside of the electrode, the electrical current infuses the skin

with rejuvenating oxygen molecules and a therapeutic zapping or tingling sensation is experienced.

Wattage and Oscillation Rates

The power level and output strength of a high frequency machine is ultimately measured by the high frequency oscillation rate (measured in Hertz), not by the wattage. It is important to choose a portable high frequency facial machine that operates at a relatively low wattage level (anything less than 10 watts) and a high rate of oscillation (>100,000+ Hz). This optimal combination is a signal of efficiency in operation and output.

A quality portable high frequency machine operating at a low level of wattage is more efficient at producing high frequency current, and will last much longer than inexpensively manufactured units running at higher levels of wattage. A portable high frequency machine operating at a high level of wattage (10+ watts) can signal a red flag. Typically, such machines are not as efficient because they have to work very hard to generate the same electrical current output, and are much more prone to internal damage and early coil burnout due to overheating.

Orange and Violet High Frequency Electrodes

High frequency electrodes are typically made of tempered glass and filled with either 1) argon gas which produces a subtle violet colored glow, or 2) neon gas which produces an orange glow. Both types of electrodes are suitable for treating aging skin, scalp and hair, while argon-filled electrodes are also suitable for treating acne.

A small amount of ultra-violet light is emitted when the violet electrode contacts the skin. Such brief and low level UV exposure is considered very safe (non-skin damaging) and provides excellent anti-bacterial and healing benefits.

The orange electrodes are generally indicated in the treatment of aging skin because they are said to direct more warmth to the treatment area which promotes blood circulation, encourages cellular turnover and improves product penetration.

Electrode Shapes and Sizes

High frequency electrodes are available in a variety of shapes and sizes to facilitate the treatment of different areas of the face and body. Mushroom-shaped electrodes are used to treat the face, neck, chest, and back; pointed electrodes are used to treat the eye area and small, specific spots such as cystic acne spots; comb-shaped electrodes are used to treat the scalp and hair; and spoon-shaped electrodes are used to treat the face, neck, and scalp.

results can vary by individual and skin type, are gradual, and do not occur overnight! Although high frequency has been shown to produce an immediate and temporary lifting effect, continued daily application can provide more cumulative long-term, lasting results.

Electrical Safety

It is important that any high frequency facial machine operating at over 5 watts offers a three-pronged power supply plug. The third grounding pin is a critical safety feature that prevents against the risk of shock to you or damage to your high frequency facial machine during operation.

Aging Skin

In treating aging skin, high frequency current firms and tones by causing an immediate circulation rush to the skin in addition to subtle tissue warming. These functions cause a very safe and natural contraction of the underlying blood vessels and tiny muscle groups. The dilation of the underlying vessels pushes away toxins, while the cells enjoy a feast of increased nutrients and hydrating volume. This result is in an increase in blood circulation and cell renewal as well as increased production levels of Collagen and Elastin which soften and smooth away fine lines, reduce pore size and improve overall skin texture.

Acne

The application of high frequency current to the skin also promotes a natural cleansing and antibacterial action that helps treat existing acne and prevents the onset of new acne. Clients experiencing cystic acne will benefit greatly from the deep penetrating germicidal action of high frequency. The skin is left feeling instantly energized, rosy,

firm, refreshed and noticeably softer - even after just one treatment. The enriched oxygen molecules produced by high frequency machines are safe and have been proven to be effective in helping to heal and restore the skin's health.

Sometimes the body can become immune to certain acne medications if used over an extended period of time. When combined with an effective acne treatment lotion, regular application of high frequency keeps the acne away long after other expensive medications and treatments can fail. High frequency gently cleanses the skin of acne-causing bacteria and unwanted toxins while making the skin more receptive to acne lotions, creams and other skin treatment products.

Enlarged Pores and Blackheads

With regular use, high frequency facials can reduce the size of enlarged pores, soften skin, control excess sebum production, and eliminate the occurrence of blackheads. The gentle spray of oxygen molecules produced by the high frequency current diminish enlarged pores by penetrating deep down into the root of the affected area and cleaning out unwanted debris and toxins allowing the pore to quickly regain its natural size once again.

Fine Lines and Sagging Skin

The oscillating action of high frequency can increase blood circulation, which in turn nourishes the skin's surface and renews underlying cells. It also produces an enriched form of oxygen, which can provide the skin with a firm, youthful, vibrant glow. It can diminish the appearance of fine lines, tighten double chins and jowls and improve overall skin texture and tone by promoting increased collagen production.

Eyes

The pulsating "oxygenation" action produced by high frequency current aids in lymphatic drainage and disperses excess fluid while increasing blood circulation. The result is a reduction in the appearance of congested, tired, puffy eyes. High frequency also helps the skin more efficiently absorb skin care products thereby extending their effectiveness.

New scientific research has shown the cause of severe dark eye circles to be broken capillaries that have leaked hemoglobin, creating a red-blue pigment deposit under the eyes. High frequency creates a circulation rush in the area and helps your current under eye product penetrate deeper into the skin tissue. The application of high frequency can be very effective at fading dark under eye circles resulting in a fresher, brighter, more youthful looking appearance.

The Appearance of Cellulite

With regular use, high frequency treatment can be very effective at reducing the appearance of cellulite when used in conjunction with a other cellulite products.

Hair Growth

Through its rapid oscillation, high frequency current improves the process of nourishment, gently exfoliates the skin, promotes local blood circulation, stimulates local glandular activity, supplies heat to the area which is soothing to the nervous system and significantly improves the scalp's receptiveness to and the overall effectiveness of post-treatment hair growth formulas. High frequency current can revitalize scalp conditions which can aid in promoting healthier hair growth.

Other Uses

High frequency is used to treat a range of concerns from skin lesions, acne, waxing procedures and cold sores to fine lines, sagging skin and puffy eyes. Common areas of treatment include the face, neck and scalp but high frequency can be used on the entire body including the back.

Cautions

High frequency facials are a safe and gentle therapeutic approach to skin rejuvenation; however the following contraindications should be noted:

- Avoid using aggressive AHA or glycolic acid products with high frequency as they an over-dry the skin, especially during the winter months.
- Avoid treating areas of broken capillaries, spider veins and rosacea as high frequency may exacerbate these conditions.
- Do not use if you are pregnant, have a pacemaker or history of heart disease.

- Avoid wearing metal jewelry during high frequency treatment to avoid risk of shock.
- Never operate the high frequency system with a broken bulb.
- Do not use outdoors, near water or around combustible substances.

Using the system for extended periods of time, could lead to early coil burnout which could void the system's warranty. Limiting the use of the system to once per day is also a safe, recommended frequency of treatment as it allows your skin to properly process and benefit from the high frequency stimulus. Using the system more frequently, will not provide any incremental benefit. Spa and salon professionals should ensure that the portable high frequency machine is turned off for a minimum of 20-30 minutes in between individual client treatments.

Red Light Therapy

Red light therapy (RLT) is a controversial therapeutic technique that uses red low-level wavelengths of light to treat skin issues, such as fine lines, stretch marks, scars, and persistent wounds. RLT may also be known as:

photobiomodulation (PBM)	soft laser therapy	cold laser therapy
low-power laser therapy (LPLT)	Biostimulation	photonic stimulation
low level light therapy (LLLT)		

When RLT is used with photosensitizing medications, it is referred to as photodynamic therapy. In this type of therapy, the light only serves as an activating agent for the medication.

There are many different types of red light therapy. Red light therapy used in a medical office setting may be used to treat more serious conditions, like psoriasis, slow-healing wounds, and even the side effects of chemotherapy.

Red light is thought to work by producing a biochemical effect in cells that strengthens the mitochondria. The mitochondria are where the cell's energy is created. The energy-carrying molecule found in the cells of all living things is called ATP (adenosine triphosphate). By increasing the function of the mitochondria using RLT, a

cell can make more ATP. With more energy, cells can function more efficiently, rejuvenate themselves, and repair damage.

RLT is different from laser or intense pulsed light (IPL) therapies because it does not cause damage to the skin surface. Laser and pulsed light therapies work by causing controlled damage to the outer layer of the skin, which then induces tissue repair. RLT bypasses this harsh step by directly stimulating regeneration of the skin. The light emitted by RLT penetrates roughly 5 millimeters below the skin's surface.

Many studies have produced promising results, but the benefits of red light therapy are still a source of controversy. The Centers for Medicare and Medicaid Services (CMS), for example, has determined that there is not enough evidence to show that these devices are better than currently existing treatments for treating wounds, ulcers, and pain.

Additional clinical research is needed to prove that RLT is effective. At the moment, however, there is some evidence to suggest that RLT may have the following benefits:

- decreasing the effects of rosacea
- promoting wound healing and tissue repair
- improving hair growth in people with androgenic alopecia
- helping for the short-term treatment of carpal tunnel syndrome
- stimulating healing of slow-healing wounds, like diabetic foot ulcers
- reducing psoriasis lesions
- aiding with short-term relief of pain and morning stiffness in people with rheumatoid arthritis
- reducing some of the side effects of cancer treatments, including oral mucositis
- improving skin complexion and building collagen to diminish fine lines
- mending sun damage
- preventing recurring cold sores from herpes simplex virus infections
- improving the health of joints in people with degenerative osteoarthritis of the knee
- diminishing scars
- relieving pain and inflammation in people with pain in the Achilles tendons

Galvanic Facials

A galvanic machine uses mild direct current (DC) to assist absorption of products deep into the epidermis. This differs from High Frequency which uses alternating current. A water-soluble, ionized and either positively (acid pH) or negatively (alkaline pH) charged solution is placed onto the skin. An electrode of the opposite polarity is then placed under the shoulder, held in the hand or clipped to the wrist or arm. This electrode is normally covered by a damp sponge or gauze to increase conductivity and ensure client comfort. A second electrode of the same polarity as the solution is placed on the treatment area. This electrode may be a roller, a ball, prong, tweezer, or an iontophoresis masque.

A complete circuit is created when the two electrodes are connected by the human body. The electrode contacting the treatment area has the same polarity as the solution, and as a result, this electrode pushes the solution away. The second electrode (with the polarity opposite of the solution) attracts the solution. The solution is both pushed and pulled into the deeper layers of the skin.

Galvanic facials are suitable for most skin types, including sensitive skin.

Oily/Acneic Treatment - For those who suffer from acne this treatment can help remove sebaceous blockages and clear congestions that leads to acne.

Benefits

A galvanic facial can smooth out fine lines, tightened muscles, and increase blood circulation, which nourishes the skin cells. stimulating cells, moving tissue fluid, softening up blackheads and driving ingredients deep into the epidermis. The use of a galvanic machine can improve cleansing, hydration, circulation, and radiance.

Iontophoresis

During an iontophoresis treatment, a positively-charged solution is applied to the skin, and a negatively charged electrode is placed under the client's shoulder or in their hand. The positive electrode is then applied to the treatment area.

Iontophoresis is ideal for treating aging skin and hyperpigmentation, as it carries active age-fighting and pigment-controlling ingredients deep into the stratum germinativum where they can impact cells.

Iontophoresis also has a calming and vasoconstrictive effect on the skin, helping to reduce sensitivity and redness. This is beneficial for clients who have Rosacea.

Iontophoresis has the following positive effects:

- Acid reaction to balance skin pH
- Tightens and firms tissues
- Constricts the follicles
- Decreases blood flow and sensitivity
- Reduces edema
- Attracts positive ions

Iontophoresis with hydroxy acid-based liquid exfoliants can be used for more intense exfoliation results on photo-damaged and highly-pigmented skins.

Iontophoresis can be implemented at various stages within a skin treatment; it is generally not offered as a standalone treatment. Typically performed for 4-7 minutes, the key element to remember is that galvanic iontophoresis assists in the penetration of any water-based products into the skin for any skin issue, even overly sun-exposed skin. It can be performed immediately after and extractions to provide extra purification and to constrict follicles. It can introduce a collagen-boosting peptide or on an area of hyperpigmentation to control overactive melanin. Visible results are long-lasting.

Desincrustation

Galvanic desincrustation is a process that softens and emulsifies sebum and keratin in the follicle. Desincrustation solutions have an alkaline pH and are negatively charged; therefore, the negative electrode is applied to the treatment area, and the positive electrode is placed elsewhere on the client's body. Performed prior to manual extractions, desincrustation prepares the skin for safe, painless and successful removal of comedones and micro-comedones. It is the deepest way to clean the skin and remove congestion.

A desincrustation solution is applied to both the skin and the gauze or cotton covering the active electrode, which traditionally is a prong or tweezer, this is then moved over the affected area. The alkaline solution is drawn to the positive electrode, and the negative ions in the solution are repelled by the negative electrode, causing an alkaline reaction in the skin. The desincrustation solution, combined with the action of the active negative electrode, results in the saponification of sebum. *Saponification* is the name for a chemical reaction between an acid and a base to form a salt. This alkali and sebum reaction forms sodium hydroxide (lye) due to the fatty stearic acids in sebum, reacting with the alkali to form soap. In the skin, the reaction softens and liquefies sebum, and this facilitates the easier release of blackheads. Following manual extractions, apply a purifying, calming serum and switch the polarity back to positive to adjust skin to an acid pH to close follicles, calm and soothe. Galvanic desincrustation has the following effects and benefits:

- An alkaline, skin-softening reaction
- Dilates follicles
- Increases blood and lymph circulation
- Increases sensitivity
- Softens compacted sebum and keratin within the follicle
- Attracts negative ions

Cautions

Galvanic treatment is not recommended for individuals who are diabetic or have circulation concerns. For best results it is recommended to have a minimum of four treatments over a period of 8 weeks.

During the client consultation, ask clients if they have recently been under the care of a physician, including the care of a dermatologist. Contraindications include chemical peels, microdermabrasion, injectables, and any other cosmetic procedures within the previous 1–2 weeks. Although the level of current is very low and therefore safe for most clients, galvanic procedures are not recommended for clients who:

- Have metal implants – including body-piercings with metal rings
- Have pacemakers
- Have heart conditions

- Have epilepsy
- Are pregnant

Derm Abrasion

Derm Abrasion is generally safe for people with all skin types. It is a skin-resurfacing procedure that uses a rapidly rotating device to sand the outer layer of the skin, decreasing the appearance fine facial lines and improves the look of scars, such as those caused by acne. Derm Abrasion can be done alone or in combination with other cosmetic procedures

Micro-Derm Abrasion

Micro-Derm Abrasion is a minimally invasive procedure used to renew overall skin tone and texture. It can improve the appearance of sun damage, fine lines, age spots, acne scarring, melasma, and other skin-related concerns and conditions.

The procedure uses an applicator called a *diamond tip wand*. This tool is glided over the skin, taking away dead skin cells by pulling and vacuuming them onto a small filter inside the wand. The skin must be held taut. At the end of the treatment, a moisturizer as well as sunscreen will be applied to your skin.

The depth of the abrasion may be affected by the pressure applied on the hand piece as well as how long the suction is allowed to remain on the skin. This type of microdermabrasion applicator is generally used in more sensitive facial areas, like close to the eyes.

Micro-Derm Abrasion is considered a safe procedure for most skin types and colors. People might choose to get the procedure if they have the following skin concerns:

- fine lines
- hyperpigmentation, age spots and brown spots
- enlarged pores and blackheads
- acne and acne scars
- stretch marks
- dull-looking skin complexion
- uneven skin tone and texture
- melasma

- sun damage

Pre-Service Preparation

You may be told to avoid sun exposure, tanning creams, and waxing for about a week before treatment. You may also be advised to stop using exfoliating creams and masks approximately three days prior to treatment. Skin should be free of any cream or oil.

Crystal Micro-Derm Abrasion

Crystal Micro-Derm Abrasion uses a crystal-emitting hand piece to gently spray on fine particles of aluminum oxide or sodium bicarbonate to rub away outer layers of the skin. Dead skin cells are simultaneously suctioned off.

This machine exfoliates the top layer of Epidermis. Softer, younger skin, as well as help in the repair of superficial scars is achieved.

After the procedure, it's strongly recommended to protect the skin with a high SPF sunblock lotion and apply serum or lotion to soothe the skin.

Hydra-Derm Abrasion

Hydra-Derm Abrasion is a two-step process that exfoliates and nourishes the skin. In the first step, a wand is connected to a machine, and the tip of the wand is used to exfoliate the skin while vacuuming the debris. The tip of the wand (called the resurfacing tip) is divided into two sections, and it directly contacts the skin. One section uses air pressure to inject a mild chemical peel onto the skin, and the second section of the wand vacuums the debris away.

Serums used during the exfoliation can contain any of the following ingredients:

- AHA/BHA acids
- Antioxidants
- Peptides
- Vitamins
- Hyaluronic acid

The second step of a Hydra-Derm Abrasion facial uses a different tip to apply a hydrating serum to the skin. The serum can contain moisturizers, vitamins, and antioxidants. The serums used during each step of the facial depend on skin type and conditions.

Benefits

Hydra-Derm Abrasion facials are gentler than Micro-Derm Abrasions. A Hydra-Derm Abrasion exfoliates, removes blackheads, stimulates collagen production, improves cell structure, smooths fine lines, increases blood flow to the skin, and plumps the skin. Antioxidants hydrate and decrease inflammation, reverse photo damage, protect lipid membranes, collagen fibers, and enzyme systems. The treatment is effective but gentle, making it suitable for all skin types, including sensitive dry skin.

The pneumatic stimulation of the skin has the positive effects of activating the basal layer and thickening and smoothing the epidermis. Fibroblast density increases, while the appearance of fine lines, pore size, and hyperpigmentation all decrease.

Facial Steamer

A **Facial Steamer** makes a facial more effective. A facial steamer not only infuses the skin with moisture, but 'enhances and accelerates' the benefits of the regimen to follow. By steaming, you've primed your face for exfoliation and targeted treatments.

Facial steaming can boost circulation and draw blood to the surface of the skin, giving your face a warm, healthy glow. Steaming may clear up mild acne, because the moisture softens the surface layer of dead skin cells called the stratum corneum. This process helps to free any dead cells, dirt, bacteria or other trapped matter that could be causing breakouts, and it can allow skin to better absorb other products after the steaming.



Steaming can sometimes worsen severe acne. Certain skin conditions that are aggravated by sweating or increased blood circulation, such as rosacea or a fungal infection, may also worsen with steaming. Never leave a steamer unattended while in operation.

How Towel Cabinet

Hot Towel Cabinets have different features that include adjustable temperature, steam heat and a UV sterilizer. A hot towel treatment on the face is a way to deep clean the skin or prepare it for extractions... Once the pores are open, extracting is made easy without damaging the skin.



Wood's Lamp

A Wood's lamp examination is a procedure that uses trans illumination (light) to detect bacterial or fungal skin infections. It also can detect skin pigment disorders such as vitiligo and other skin irregularities. ... This test is also known as the black light test or the ultraviolet light test.



Magnifying Lamps

Magnifying lamps are used during the assessment portion of a facial but are also used during professional services like eyelash extension application, eyebrow shaping, brow tinting, waxing, IPL, RF, extractions, injectable and permanent make-up.

Objective Two Self-Test

1) What has a high frequency facial been shown to stimulate?

2) With regular use, what are the benefits of a high frequency facial?

3) Why is it important to avoid treating areas such as those with broken capillaries, spider veins, and rosacea with high frequency treatments?

4) List three benefits of a galvanic facial.

5) What are the two steps of a Hydra-Derm Abrasion facial?

Objective Two Self-Test Answers

- 1) High frequency facials have been shown to stimulate cell renewal and improved penetration and absorption of skin care products by gently warming the tissue of the skin.
- 2) With regular use, a high frequency facial can reduce the size of enlarged pores, soften skin, control excess sebum production, and eliminate the occurrence of blackheads.
- 3) It is important to avoid treating areas such as those with broken capillaries, spider veins, and rosacea with high frequency treatments because the treatments may exacerbate the conditions.
- 4) A galvanic facial can smooth out fine lines, tighten muscles, and increase blood circulation, which nourishes the skin cells. stimulating cells, moving tissue fluid, softening up blackheads and driving ingredients deep into the epidermis. The use of a galvanic machine can improve cleansing, hydration, circulation, and radiance.
- 5) The two steps of a Hydra-Derm Abrasion facial are: exfoliation and nourishing of the skin.

Objective Three

When you have completed this objective, you will be able to:

Demonstrate a specialized facial.

Pre-Facial Preparation

The pre-facial preparation involves setting up the bed and workstation, and interacting with the client. Before the client arrives, prepare the bed by fitting it with clean sheets (both fitted and flat), a clean pillow case for the knee pillow, and a clean blanket.

Prepare the workstation with the following items.

headband/towel	face towels	finger cot / vinyl or nitrile gloves
eyepads	hot towel warmer	steamer
stainless steel bowl	mask mixing bowl	mask brush
extractor	cold compress(eyepads)	

Consult *EST 1* for instructions regarding performing sanitation, disinfection, and sterilization of a workstation.

Have the following products ready for use:

cleanser	toner	gentle exfoliator
mask	day cream	eye gel
serums / ampules		

After the client has been greeted and guided to the service area, perform a client consultation. Please review the information found in *EST 4*. Next, explain to the client what they can expect during the treatment. Advise them to remove their jewelry and top; if the client is female, ask her to drape her bra straps off the shoulders or under the arms or take it off. Have them drape the towel or put the wrap on that is supplied, and lay on the facial bed on their back. Leave the room to allow them to get ready.

Cleansing the Skin

While the client is lying on their back, under the blanket and sheet, wrap the hair in a headband or a towel, begin cleansing their skin.

Analysis

Cover the client's eyes with eye pads. With a magnifying lamp, look at the skin and determine what kind of treatment will be needed. The magnifying lamp will help show skin type (oily, dry, etc.) and any skin conditions (acne, sunburn, blackheads, etc.) that need to be addressed during the treatment. This is when recommendations for the best treatment can be discussed. Please review the information found in *EST 13*. If the client has rosacea or thin skin, do not exfoliate or steam. Steaming and exfoliation is effective for scarred skin and normal, healthy skin.

At this point, it is between the student and instructor to determine the course of treatment. The following procedures might not be used in all advanced facial treatments.

Gentle Exfoliation

Gentle exfoliation removes dead cells from the top layer of the skin. By removing this layer, it helps brighten the skin's complexion, and allows the skin-care products to penetrate deeper into the skin (making them work better). Select a non-chemical scrub that is safe to use on all skin types. Exfoliation would not be performed after an abrasive facial.

Exfoliation

Depending on the facial technique being used, the exfoliation process can take place before, after, or during the steam. An exfoliation gel, cream, mask, peel, or gommage will usually be applied before or after the steam. These products need to be left on the face to treat blackheads. Exfoliation products that involve scrubbing or massage techniques can usually be used during the steam step.

Steam

Warm steam is applied to the face using either a heated, moist towel or a machine that gently directs a layer of steam to the face. The steam weakens blackheads and whiteheads and the sweat it produces will help clear the pores. The skin must be completely dry before a machine can be employed.

Extractions

After the skin has been exfoliated and the steam has relaxed the skin, extract any whiteheads and blackheads. Because the previous steps were preparation for this one,

the extractions should not be very painful. Use the magnifying lamp to locate the imperfections in the skin. Extractions can be done with an extractor or the fingers.

Massage

After the extraction procedure, a facial massage will be used to stimulate facial muscles. Depending on the type of facial, oil or lotion or ampules may be used during the massage.

Facial Mask

After the massage, a facial mask will be applied. The mask will be specially formulated to match the skin type and help treat any skin conditions that were discussed during the consultation. Mask types include: calming, clay, gel, hydra-facial, and oxygen. During most facials, a massage while waiting for the mask to work is done on the arms and hands.

Final Application

After the mask is removed, toner is applied to close the pores; apply specialized ampules or serums; lastly, apply a moisturizer. The moisturizer is tailored for the client, and its selection will depend on the client's skin and the desired results of the treatment.

Before the client leaves, provide them with a home care regimen. This will include products to use and techniques to extend the positive benefits of the treatment they have just received. Facials are recommended once a month for the best skin health results. Inform clients to avoid the sun, hot tubs, swimming pools, and applying makeup for 24 hours after the service. This time period might be lengthened or shortened depending on the client's skin.

Laboratory Exercise

Purpose: Perform an advanced facial with chemicals. This exercise will be a low level glycolic peel.

Materials:

headband/towel	face towels	finger cot / vinyl or nitrile gloves
eyepads	hot towel warmer	steamer
stainless steel bowl	mask mixing bowl	mask brush
cleanser	cold compress(eyepads)	mask
toner	Eye gel	Serums/ ampules
Day cream	Glycolic peel	
Baking soda and water mixture		

Procedure: this procedure starts after the cleansing and analyzing noted above. Steam the skin for approximately 5 minutes. Brush the glycolic peel onto the skin and let it stay on as recommended by the manufacturer. While the peel is on the skin, mix three parts water to one part baking soda. One tablespoon of baking soda will suffice. Paint the baking soda mixture onto the peel. It will bubble as it neutralizes the peel. Remove the baking soda and peel after three minutes with a hot towel. At this point, toner can be applied, but caution must be exercised, as some people's skin will be too sensitive for toner. Moisturize the skin with ampules or serum. The final step is to add a moisturizer.

Instructor verification:

The following information is specific to an advanced facial with a machine. These steps are general, and apply to many different types of machines. Follow the information below to perform an advanced facial with a machine.

Selecting the working level

This is done by turning the machine on and applying the head to the inside of your arm. Micro-Derm Abrasion machines use a generated airflow to deliver and retrieve crystals. This generated airflow will not operate until a continuous circuit is made by applying the head to the skin.

Any/all adjustments should only be made whilst the head is applied to your skin.

A correct working level is established by:

- Skin type
- Imperfection
- Treatment area
- Number of previous treatments
- Clients' remarks
- Results from previous treatments
- Clients' previous demonstrated and anticipated (today's) tolerance level

The eye and brow areas are delicate; therefore, it is essential that the machine be set to its lowest possible operational level, and the fine diamond-tipped head is used when working around these areas.

The airflow dial is there as a guide only and must not be fully relied upon in ensuring correct working levels. This can be done by 'feel' only.

Working-level ranges: Diamond tipped head -0, 2 - -0, 6
 Crystal head -0, 2 - -0, 4

When treating clients with Mediterranean skin, background, heritage or those with olive-toned skin to darker toned skin, strokes with the head should be made in one direction only.

When treating the fairer skin types, strokes with the head can be made in either one direction or backwards and forwards. In all cases, strokes should be slow and deliberate, taking care not to press the head into the area being treated.

Stroke Application

1. Fully supporting the selected area, place the head onto the skin; this will create the vacuum seal and continuous flow - ON
2. Slightly lift the head without breaking the vacuum seal- LIFT
3. The head should be held like a pen and, using a light pressure only, maneuver the head using the stroking method best suited to treat the area, skin type and skin condition - GLIDE

Recommended Working Procedure

Working one half of the face at a time:

1. Across the forehead
2. Temple to cheekbone (avoid getting too close to the eye area)
3. Cheekbone to the jawline
4. Chin
5. Cheekbone to the jawline (crossways)
6. Nose

Subsequently, work in the same area on the other side of the face using the same procedure. Some areas may need additional work, i.e. T-Zone, open pores, acne scarring, acne, pigmentation etc. These areas may be re-worked at a higher or lower level depending on the desired outcome, skin type, condition etc.

USING THE FINE DIAMOND HEAD, THE MACHINE SHOULD BE TURNED DOWN TO ITS LOWEST OPERATING LEVEL TO WORK THE EYE AND BROW AREAS. THE SKIN AROUND THE EYE AREA IS VERY DELICATE. THEREFORE, IT SHOULD ALWAYS BE SUPPORTED AND NEVER STRETCHED. THE FINE DIAMOND HEAD SHOULD ONLY BE USED AROUND THIS AREA.

Asian, Mediterranean, African & Caribbean skin types.

The number of melanocytes produced in these skin types is about the same as in all races. The differences in color are governed by the amount of pigment the melanocytes

produce and disperse to keratinocytes. Melanocytes synthesize melanin from the amino acid Tyrosine in the presence of an enzyme called Tyrosinase (synthesis occurs in a melanosome).

Heat and exposure to ultraviolet radiation increase the enzymatic production that, in turn, increases pigmentation.

With the majority of skin types, melanin is produced mostly in the epidermis while carotene is produced mostly in the dermis; however, to further compound the situation with Asian, Mediterranean and Aboriginal skin type's carotene is also found in the stratum corneum.

To add a further dimension yet, these skin types must avoid the use of friction on the skin, i.e. Microdermabrasion, peels, manual exfoliation techniques/products. A by-product of ANY form of friction is heat. Friction = heat = increased tyrosinase production = pigmentation!

Treating Differing Skin Conditions

Fine Lines & Wrinkles

To treat specific lines, avoiding breaking the skin and, to avoid overworking surrounding areas of the skin, you must remain and work within the parameters of the line.

Hypertrophic Scars

Increase the crystal velocity. Pulsate the head on the scar allowing the crystals to hit the scar area but not to penetrate the skin, i.e. crystals must skim off the skin surface.

Rosacea/Broken Capillaries

Because of the nature of Rosacea/Broken Capillaries, the machine should be set to low, and only the fine Diamond Head must be used to avoid the possibility of further aggravating the area or breaking the capillary wall.

Open Pores/Thickened Skin/Congested Skin/Dull Skin/Seborrhoea

These skin types usually benefit from using both crystal and diamond after the initial treatment and, if required, re-work the area. The aim is to refine the area and generate

less oil production. You may wish to increase the crystal and/or Diamond Head working level.

Pigmentation

The treatment method must be smooth (one direction only) to avoid causing excessive friction to the skin, therefore increasing the pigmentation. The use of diamond heads is recommended in pigmented areas.

Acne/Acne Scarring

These skin types usually benefit from using both crystal and diamond. After the initial treatment and, if required, re-work the area. The aim is to refine the area, generate less oil production while smoothing the overall skin texture. Good supporting techniques are essential to thoroughly work this type of skin. You may wish to increase the crystal and/or diamond working level.

Eczema/Psoriasis/Dermatitis

Except for clients who have a history of acute underlying Eczema/Psoriasis or Dermatitis using a fine diamond head, only a light treatment can normally be conducted/tolerated over the affected area. For those clients who have an underlying Eczema/Psoriasis or Dermatitis, then Micro-Derm Abrasion over these areas must be avoided at all times.

Active Acne

Micro-Derm Abrasion will help draw out impurities, so the skin will get worse before getting better. Need to be on home care products

Cystic Acne

Don't do Micro-Derm Abrasion over these areas. Home care products first Micro-Derm Abrasion around. AHA/BHA will clear up quite quickly.

Pustule Acne

Get them on AHA/BHA first to get the swelling/inflammation down. Can Micro-Derm Abrasion on smaller pustules.

After Care

Remove any excess crystals. This is best done with a large brush. Avoid excessively rubbing the skin with cloths, sponges or the hands.

Moisturise

Apply a light layer of Moisturiser. This may cause a tingling sensation and for the skin to feel a little active for a few minutes. This is normal.

Instructor Verification:

Module Summary Self-Test

1) How was BHA evaluated to determine if it presented a risk at current levels of exposure?

2) What are parabens used for?

3) What benefits can be gained from a high frequency facial?

4) What is the pH balance and charge of a desincrustation solution?

5) What contraindications prevent exfoliation and steam?

6) What information should be delivered to clients as part of their after care/home care regimen?

7) What mixture is used to neutralize a glycolic peel?

8) What factors are used to establish a correct working level of a facial machine?

Module Summary Self-Test Answers

- 1) BHA was evaluated under the Government of Canada's [Chemicals Management Plan](#).
- 2) Parabens are used as preservatives.
- 3) The high frequency facial is a skin care treatment to help treat and prevent stubborn acne, shrink enlarged pores, reduce the appearance of fine lines, decongest puffy eyes, fade dark eye circles, rejuvenate the condition of the scalp and nourish hair follicles for healthier hair growth.
- 4) Desincrustation solutions have an alkaline pH and are negatively charged.
- 5) Contraindications for exfoliation and steam are rosacea or thin skin.
- 6) Inform clients to avoid the sun, hot tubs, swimming pools, and applying makeup for 24 hours after the service. This time period might be lengthened or shortened depending on the client's skin.
- 7) A mixture of baking soda and water is used to neutralize a glycolic peel.
- 8) The factors used to establish a correct working level of a facial machine are:
 - Skin type
 - Imperfection
 - Treatment area
 - Number of previous treatments
 - Clients' remarks
 - Results from previous treatments
 - Clients' previous demonstrated and anticipated (today's) tolerance level