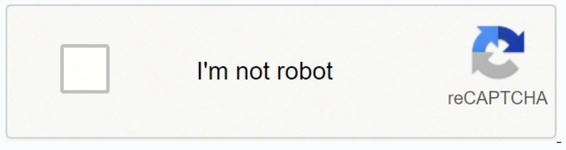

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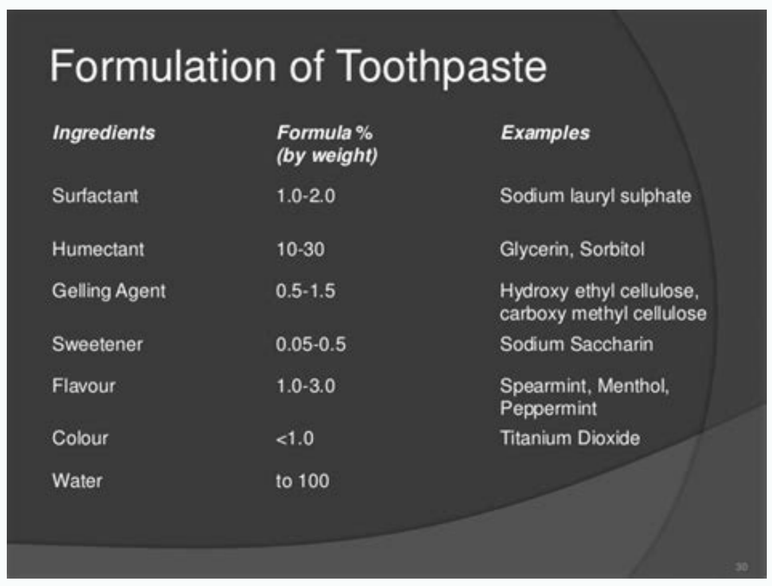
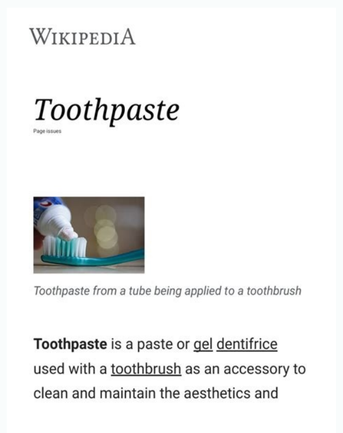
Toothpaste ingredients pdf





Toothpaste ingredients and functions. Toothpaste ingredients list. Toothpaste ingredients label. Toothpaste ingredients crest. Toothpaste ingredients colgate. Toothpaste ingredients that cause acne. Toothpaste ingredients that cause chapped lips. Toothpaste ingredients to avoid.

To obtain the multi-claim products needed for the dental assistance category, it is necessary for the formulator to use a variety of different ingredients. This poses a series of demands on the development process. Innovations in the fields of pharmaceutical technology have contributed to the formulation of superior efficacy and other attributes that can contribute to the clinical response and the patient's acceptability. Improved clinical efficacy and tolerability, together with the conditioning signals, should encourage respect for the patient with oral hygiene to complete the professional efforts aimed at preventing diseases. The most effective way to prevent the development of dental disease is to check the production of dental plaque. It consists of microbial action. The removal of the plaque from the teeth and the related areas is essential for maintaining a healthy mouth. In this card we presented the main components of toothpastes and colluri. For active ingredients, their expected effect as therapeutic agents is also explained. Keywords: formulation, ingredients, toothpaste, cast the most effective way to prevent development of dental disease is to check the production of dental plaque. The plaque is a soft thin layer that deposits on gums teeth and all the appliances mounted in the mouth. It consists of microbial action. Dietary sugars, in particular sucrose, contribute to the formation of the plaque and their presence increases the formation rate and thickness of the plate. The removal of the plaque from the teeth and the related areas is essential for maintaining a healthy mouth (1). In this card we presented the main components of toothpastes and colluri. For active ingredients, their expected effect as therapeutic agents is also explained. A toothpaste defined as a semi-solid material Remove natural deposits from the teeth and should be used simultaneously with a one A mouthwash is defined as a non-sterile aqueous solution mainly used for its deodorant, refreshing or antiseptic effect. Mouthwarshes or rinsing are designed to reduce oral bacteria, remove food particles, temporarily reduce bad breath and provide a pleasant taste. Mouthwarshes (rinsing) are generally classified as cosmetics or therapeutic or as a combination of the two. The cosmetic rinse are commercial products that remove oral debris before or after brushing, temporarily supproved the bad breath, reduce bacteria in the mouth and refresh the mouth with a pleasant taste. Therapeutic rinsing often have the advantages of their cosmetic homologies, but also contain an active active ingredient (such as fluorine or chlorhexidine), which helps protect from some oral diseases. The quantity of the different ingredients in the colluters varies from product to product. Some have practically the same composition as toothpicks, even if they do not contain abrasives. Distinct from the toothpick most of the oral washing contain alcohol, as a preservative and a semi-active principle. The quantity of alcohol is usually varied from 18 to 26%. Abrasive abrasives are the substances that are used for abriating, grinding or polishing. Remove substances that adhere to the surface of the teeth without scratching and bringing out their natural shine. One of the abrasive mayor's own properties is hardness. The degree of abrasiveness depends on the hardness of the abrasive, from the morphology of the particles and the concentration of the abrasive in the pasta. Because the hardness of the enamel on the surface of the teeth is 6-7 on the MohaÃ ¢ â € s ladder, the hardness of an abrasive should be 3 or less. For practical purposes, the particle size must be 20Ãžâ¼m or not; If more than this can damage the surface of the teeth and gums. The abrasives In toothpicks they are often not as hard as enamel, but as hard or as hard as toothpaste. Abrasives are more often found as crystals, small and smooth particles are to prevent teeth wear. Although many methods have been suggested for measuring abrasive powders incorporated into toothpaste, the RDA (Radioactive Dentine Abrasion) method is now the most widely accepted method in the world. In this method, an extracted human tooth is irradiated to convert 31P into its dentin into 32p. The tooth is then placed in an abrasion test machine along with an abrasive and the 32p abrasion is measured with a radioactivity counter. The pH of the abrasives should range from weakly acidic to weakly alkaline and should be water-insoluble, tasteless, odourless white powders. The following abrasives are widely used, which meet these conditions:A fine, white, odorless, microcrystalline powder, practically insoluble in water (3). This abrasive has been used for a long time. Its abrasiveness is generally higher than that of calcium phosphate. There are two types-one heavy and precipitous type. The raw material for the first is limestone and for the second calcium hydroxide.There is a dihydrate and an anhydride form. Since the anhydride form is harder than the dihydrate form, it is not often used alone. The dihydrate form has a slight abrasive effect and feels good during use. It is neutral in pH and has good compatibility with the other ingredients. However, when it remains in toothpaste for a long period of time, it loses its crystallization water, changes its anhydride shape and hardens the toothpaste. For this reason, a magnesium salt or other stabilizer is added (2).The silica used in abrasives consists mainly of amorphous silicon dioxide of high purity and there are different types of silica whose properties vary according to the production method. Silica is very suitable for use in toothpaste containing fluoride because insoluble salt does not form when it reacts with fluoride. Since its index of Is lower than other others Silica can be used to make clear totpastes gel. Aluminium hydroxide is also used as an alternative to calcium phosphate, dibasic, because it is cheaper. Other abrasives such as calcium pyrophosphate, insoluble sodium metaphosphate, magnesium carbonate and alumina can also be used for special types. Binders are used to prevent the separation of powder and liquid ingredients and to give an appropriate degree of viscosity and shape to the toothpaste. They can prevent toothpaste from drying with binding water. In addition, they have an influence on dispersion, foaming, rinsing and other qualities of toothpaste in the oral cavity. The most common binder at the moment is sodium carboxim-ethylcellulose (CMC). Carboxymethylcellulose is physiologically inactive, dissolves in water, is very compatible with other ingredients, highly stable and relatively low in price. There are many types of CMCs with a variety of different characteristics that result from different degrees of substitution and polymerization of hydroxy groups, so you need to select the one that is most appropriate for the intended purpose. Other known cellulose derivatives include methylcellulose, hydroxyethylcellulose and hydroxypropylcellulose. Examples of other binders used are polysaccharides such as sodium alginate, carrageenan and xanthine gum; synthetic polymers such as sodium polyacrylate and inorganic clay minerals such as bentonite and laponite. It is obtained from algae belonging to the Phaeophyceae, mainly species of Laminaria (4). It consists primarily of the sodium salt of alginic acid. White or pale, whitish, odourless or almost odourless and tasteless powder. Slowly soluble in water to form a viscous, colloidal solution; practically insoluble in alcohol and ether. Sodium alginate has little surface activity and its emulsifying power is obtained by increasing the viscosity of the aqueous phase. Is as a suspension and thickening agent and in the preparation of of pastes, creams and gels. Depending on the required viscosity, 1 to 10% is used in the preparation of pastas and creams. Dried aqueous extract of the species of Chondras, Gigartina, Eucheuma or other members of the families GigArti-naceae, Solieriaceae, Hypnaceae and Furcellariaceae. White to yellowish coarse or fine powder, almost odourless with a muculent taste. Soluble 1 in 100 of water at 85 194;176c. It disperses more easily if first mixed with alcohol. It is used as an emulsifier, suspension and thickening agent in formulations of toothpaste, creams and emulsions. Carrageens are galactic or D-galactose polymers, are highly sulphonated and are anions with multiple electrolytes of molecular weight ranging from 105 to 106. All carrageens have a linear structure of type AB) n, with alternating 1,3 and 1,4 bonds. Classically, seven types of carrageenan are distinguished according to the nature of the sequence. These are t, 206;Ão, éÂ”, é;Ã1Á¼Ã¤Ã1⁄2Ã¤, éÂ3Á carrageenan (5). These are synthetic polymers with high molecular weight of acrylic acid, linked to sugar polyalkene ethers or polyalcohols. They are produced in different grades characterized by the viscosity of a defined solution. White hygroscopic powders with a characteristic slight odour. They are inflated in water and other polar solvents after dispersion and neutralisation with sodium hydroxide solution (6). It is also soluble in water, alcohol and glycerol. Carboimer is used in toothpicks as a binder (thickener). Xanthomonas campestris is a bacterium that grows commonly on some species of Brassicaceae in which, using the plant substrate, it produces a gummy exudate: xander, a high molecular mass anionic polysacchar. It exists as sodium, potassium or calcium salt (6). Industrially, this is produced by a bacterial culture on properly buffered and aerated media containing carbohydrates with Xanthomonas campestris. At the end of the fermentation, the Is it? for precipitation with isopropanol, filtered, dried and crushed (7). It's a cream-coloured powder. Soluble in hot and cold water, xanthine rubber forms aqueous solutions whose viscosity remains virtually unchanged by temperature variations, as well as pH variations. The behaviour of these solutions is of a pseudoplastic type: decrease of viscosity proportional to the cutting and immediate recovery of initial viscosity after cutting. Incompatibilities are rare (borates, hypochlorites, peroxides, free radical generators). The rubber is compatible with most salts, with moderate concentrations of surfactants and with most preservatives; tolerates alcohol concentrations up to 50% percent. Compatible with most vegetable hydrocarbons, it does not form gel by itself, but forms thermally reversible gel. It is free of toxicity. Xantan rubber is used as a stabilizer, binder (thickener) and emulsifier. Humectants They predict the loss of water, and the consequent hardening of the pasta in the tube or when it is exposed to the air. They also provide creamy consistency. These are short-chain polyalcohols such as glycerol, sorbitol (highly concentrated aqueous solution), propylene glycol and polyethylene glycol. Solvent Water is the most common solvent used in toothpaste. It dissolves the ingredients and allows them to be mixed. The alcohol is used in rinse in the mouth (mouthwash) as a solvent and flavour enhancer. The functions of foaming agents are to disperse toothpaste throughout the oral cavity to improve the cleaning effect and, acting as a surfactant, clean away the dirt inside. In addition, with their foam volume, they give a feeling of thickness and satisfaction. For foaming agents surfactants are selected with excellent foaming, dispersion, suspension, permeation, cleaning and resistance to hard water, as well as © toxicity or irritation. Surfactants reduce the surface tension of the fluid environment in the oral cavity in such a way that substances in toothpaste/collutory can contact teeth more easily. They peel and dissolve plaques. This makes it easier to clean your teeth. The foam effect produced by surfactants is also useful in cleaning teeth and helps to remove debris and gives a feeling of cleaning. Another function of the surfactant is the dispersion of the flavors in the toothpaste/collutory. Because, they come in the mouth, they pay attention to taste and smell. The most frequently used at the moment is sulphate lauryl sodium; Other examples are the sarcoma of sodium lauryl, sodium alkyl succinate, sodium sulphonate monoglyceride coconut and sucrose fatty acid esters. Mix of sulphate of alkyl sodium, consisting mainly of dodecyl sulphate sodium. It is a powder or white or yellow crystals with a slight characteristic smell. Easily soluble in water; partially soluble in alcohol (6). It has a high affinity for proteins and is a strong denaturating agent. Incompatible with cationic materials and acids below pH 2.5. Laurilsulfate sodium can be irritating to the skin and mucosa. It can also damage the layer of mucosa by denaturating its glycoproteins (8). The epithelium will therefore be more exposed for irritants and this can cause aftous ulcers in some patients. It has also been stated that there is a connection between the use of toothpaste or collutory containing SLS and a greater frequency of recurrent aphous ulcers (RAU) in some patients. A product without SLS can therefore be recommended for patients with RAU (8). The negative effects of SLS have led to the development of toothpaste and collutors with alternative surfactants, such as sodium lauryl sarcoma, soy-popybitaine. Common for these surfactants is that they are less irritating for oral mucosa. It is effective both in acid and alkaline solution and in hard water. In addition, it has antimicrobial activity due to its abilityinterfere with the membranes and a variety of processes and micro-organisms. Flexing agents rid themselves of the unpleasant smell and taste of other raw materials and give a cold and refreshing taste. Combinations of essential oils insoluble in water, such as spearmint, peppermint, eucalyptus and menthol are often used as flavoured agents in toothpaste and in the blenders. Flavouring agents are soluble and dispersed through the paste or liquid through the surfactant. Sweet Painkillers also improve the taste of toothpastes and colorants and give them a delicate and sweet taste. The most common sweeteners are sodium saccharin, sorbitol and glycerol. Xylitol is a sweetener that is also claimed to provide anti-caries activity. Colouring agents Most toothpastes and collectors contain colouring substances that give them an attractive appearance. Colour substances are classified by the Colour Index (CI), published by the Society of Dyers and Colourists and the American Association of Textile Chemists and Colourists, or by a system called FD&C Colours. Titanium dioxide is often added to toothpaste to give them a white colour. Preservatives Preservatives prevent the growth of micro-organisms in toothpastes and collectors. They mostly include sodium benzoate, methylparaben and ethylparaben. Pharmaceutical agents One or more therapeutic agents are usually added to toothpastes and toothpastes. Most toothpastes today contain fluorides to prevent caries. Recently a development of several toothpastes has been developed with additional purposes, such as the removal of the stain and the calculation, and the prevention of gingivitis, sensitive teeth and gum problems. In the following text the different therapeutic agents are classified according to their claimed ef-feet. Antique agents Fluoride is considered the most effective agent of carbohydrates, and almost all toothpastes today contain fluorine in one form or another. The shape common is sodium fluoride (NaF), but monofluoro-phosphate (MFP) and tin pondThey're also used. The amount of fluorine in toothpaste is usually between 0,10-0,15%. Fluorine is more advantageous when the mouth is not rinsed with water after brushing the teeth. In this way a higher amount of fluorine is maintained in the oral cavity. The toothpastes are the main vehicle for fluorine. The combination of therapeutic and cosmetic colorants usually also contains fluorine, but in a non-therapeutic dose. However, there are fluorine rinsers with higher fluorine concentrations. The mechanism by which fluorine prevents the cavity from being clearly understood. It is known that the fluoride ion (F-) can replace the hydroxyl ionic (OH-) in hydroxylates, the main crystalline structure of enamel. The replaced crystal, called fluorapatite, is more resistant to acids, such as those produced by plate bacteria, than the original hydroxyapatite (9).. The tooth is formed and the enamel is formed, the ingested fluorine is incorporated into the enamel. Therefore, because © The enamel first develops its outer layer, it is possible to deposit more fluorine that will be deposited on the outer levels compared to the inner layers. It is this layer of surface enamel containing fluorine that matters the resistance to cavities to a tooth. The incorporation of fluorine into enamel can be represented as a chemical reaction: it is also suggested that fluorine has anti-bacterial actions. In an acid environment, if fluorine is present, fluoride (HF) is formed. HF is an undigested acid and week that can penetrate the bacterial cell membrane. The entry of HF into the raised alkaline cytoplasmic partitions in the dissociation of HF to H + and F. This has two separate and important effects on cell physiology. The first is that the f-interactives released with the cellular constituents, including various enzymes sensitive to F. The second effect is an acidification of the compartment caused by the protons released. Normally the protons are pumped out of the cell, but the fluoride inhibits these processes. Intracellular reduced. intracellular. will make the environment less favorable for many of the essential enzymes required for cell growth (10).. The most important anti-caries effect may have been due to the formation of calcium fluoride (CAF2) in the plaque and on the surface of the enamel during and after flushing or brushing with fluoride. CAF2 serves as a fluorine reservoir. When drops of pH, fluorine and calcium are released into the plaque fluid. Fluoride diffuses with acid from the plaque into the enamelled pores and forms fluoropatite (FAP). FAP incorporated into the surface of the enamel is more resistant to a subsequent acid attack as the critical pH of FAP (pH = 4.5) is lower than that of Hydroxyapatite (ha) (pH = 5.5). Fluoride decreases demineralization and increases the remineralization of the enamel between pH 4.5-5.5, and thus the demineralization period. Mineralization is abbreviated (10).a polyhydric alcohol (polyol) relative to pentose sugar, XyLose. White crystals or crystalline powder. Very soluble in water; sparingly soluble in alcohol (6). It has a sweet taste and produces a cooling sensation in the mouth. Xylitol cannot be fermented by oral microorganisms. It is considered a caryotic agent as it can inhibit the metabolism of carbohydrates in various oral microorganisms. Xylitol appears to be unique among sugar alcohols in its inhibitory effect on glycolysis. The inhibitory effect on glycolysis was related to the autake of xylitol via a specific fructose-specific PTS system (phospho-transferase) and subsequent intracellular accumulation of xylitol-5-phosphate. This mechanism leads to a reduction in glucose-reduced acid formation and a reduction in the content of Streptococcus mutants in plaque and saliva (11).Calcium and phosphate integration in a toothpaste or mouth rinse will increase the concentration of these ions in the oral cavity. That way they get better. remineralization and increase fluorine absorption (12). Studies. Some studies have shown that bicarbonate is one of the salivary salivary salivary What a potentially modifies the formation of caries. Increase the pH in saliva and in this way it creates a hostile environment for the growth of acid bacteria. Sodium bicarbonate can also change the virulence of bacteria that cause the decay of the teeth. Animal studies have

shown that toothpicks containing sodium bicarbonate reduce the quantity of streptococcus sobrinus and streptococcus mutans, and this can reduce caries. Man studies show a statistically reduction in the number of mutarian streptococci. Sodium bicarbonate can also prevent caries by reducing enamelled solubility and increase enamel remineralization (13). Anti-plaque agents has been shown that Glucosiltransferase and FrattosilTransferase enzymes are incorporated into an active form in the pole; And summarizing the glucan in situ from sucrose, it can provide a surface for colonization from Streptococcus mutans. These enzymes can be inhibited from SLS. This inhibition can clearly delay the regrowth of the plaque (14). Triclosan is a non-ionic chlorinated phenolic agent with antiseptic qualities. Triclosan has a wide-spectrum efficacy on gram-positive bacteria and most grams negative. It is also effective against mycobacters and anaerobic bacteria strictly, and against spores and mushrooms of the candid species. The mechanism of its antiseptic action acts on the microbial cytoplasmic membrane, causing cellular constituent losses and thus causing the lysis of microorganisms. Despite its in vitro activity, clinical studies on the plates have revealed only moderate levels of antiplaque activity. Tests have accumulated that suggest that Triclosan itself does not produce optimal inhibitory effects of plates without the addition of other chemicals that increase its antibacterial effect. The most commonly used are PVM / ma copolymer [poly (methylvinylene / maleic anhydride)] and citrate zinc. Improve the surface retention of three 173; elosan (15). An antiseptic must be stored in the oral cavity for a amount of time to have anti-plaque activity. The retention sites for triclosan are not yet established, but teeth and saliva mites are suggested. Triclosan also has an anti-inflammatory effect acting on the eicosanoid waterfall. Triclosan inhibits both cyclosis (COX) and lipoxygenase (LOX), thereby inhibiting the production of prostaglandins and leukocytes. Clinical studies also indicate that triclosan reduces oral mucosa l irritation caused by sodium lauric sulphate (16,17). The metal lions most used in dental preparations are zinc (Zn2+) and tin (Sn2+). These metals have the ability to limit bacterial growth, inhibit platelet formation, inhibit the glycolytic sequence in oral anaerobic bacteria, and limit the ability of platelet bacteria to convert urea into ammonia (14). They can also inhibit some bacterial enzymes. It is also possible to reduce the ability of bacteria to colonize tooth surfaces. (a) Staus-ions stannous-ions are added to toothpastes and collectors in the form of tin fluoride or tin pyrophosphate. Staus fluoride has often been used as a vehicle for fluorine in dental preparations. Currently it is rarely used, although a vast research over the last two decades has established that tin fluoride has several interesting properties. It has been claimed that tin fluoride is more effective in inhibiting caries than sodium fluoride and mono-fluorophosphate. This is probably because © tin fluoride has additional properties compared to other fluorine vehicles. However, these differences are not always statistically significant in small-scale studies (18). Mouth flushes containing tin fluoride were found to reduce the relative amounts of Streptococcus mutans and Streptococcus sanguis in plaque, to reduce the population of Streptococcus mutans in saliva and to increase levels of Lactobacilli (14). The enamel treated with pond fluorine becomes becomes a property that can contribute to the antiplacer effect of stannous fluoride, as hydrophobic surfaces are less easily colonized by bacteria (18). The carystatic protection provided by stannous fluoride depends on the CaF deposit on the tooth surface. Both the antiplate effect and the inhibition of acid formation by stannous fluoride are most likely caused by the oxidation of thiol groups that stannous fluoride is known to perform. Stannous ions can inhibit bacterial glycolysis because enzymes depend on the thiol group for their biological activity (18). The antiplate effect of SnF can also contribute to karyostatic activity.b) Zinc ions Zinc is added to toothpaste and mouthwashes in the form of zinc chloride or zinc citrate. Zinc is a relatively non-toxic and non-cumulative essential trace element Zinc inhibits the PTS pathway of glucose absorption by Streptococcus mutans, Streptococcus sanguis and Actinomyses naeslundii, and the metabolism of glucose to lactic acid. The effects of zinc are thought to be intracellular, resulting from the inhibition of sulfhydryl enzymes, in particular enzyme I in the phosphotransferase transport system and of aldolase and glyceraldehyde dehydrogenase in the glycolytic pathway. Zinc also inhibits the activity of the trypsin-like protease of Porphyromonas gingivalis and Capnocytophaga gingivalis (14). The role of zinc in plaque inhibition or as a stone inhibitor when used in toothpaste has been established by a number of workers (14). The essential oils of thymol, menthol, eucalyptol and methyl salicylate are believed to have antibacterial activity by altering the bacterial cell wall. It has been reported that mouthwash containing these active substances significantly reduces plaque and gingivitis.Chlorexidine formulations are standard anti-plate collectors due to their long spectrum. extended. activity and potential inhibition of plaques (20). The mechanism of action of chlorex-idine is related to the reduction of film formation, to the alteration of bacterial absorption and/or attachment to teeth and to the alternation of the bacterial cell wall resulting in lisis (9). Chlorhexidine is effective against Gram-positive and Gram-negative bacteria, but has the greatest effect against Gram-positive bacteria. Chlorhexidine is bacteriostatic at very low concentrations, especially against Streptococcus mutans. It also has effect against mushrooms, but little or no effect against spores. Chlorhexidine is held in the oral cavity for 24 hours by binding to the phosphate, sulphate and carboxylic groups present in bacteria, plaques, saliva and enamel surface. Antibacterial action is due to a perturbation of transport through the cell membrane and bacterial metabolism, causing losses through the cell membrane. Its antiviral effect is caused by the interaction with the viral protein cap. The local side effects of chlorhexidine, including taste disorders and staining of teeth, language and food materials, have tended to limit its use only in the short term (20). These agents act by delaying the calcification of dental plaques, thus favoring the removal of plaques with normal tooth brushing (21). Among the anti-calculum, crystalline growth inhibitors were more extensively clinically tested. The pyrophosphate was introduced in toothpaste to inhibit the formation of supragengic dental calculations (21). Pyrophosphate is added as tetrasodium pyrophosphate, tetrapotaxic pyrophosphate, or disodium pyrophosphate. It has been shown that pyrophosphate has a high affinity for the surfaces of hydroxypatite (HA), probably due to an interaction with Ca2+ in the hydration layer. Interacting with HA and theof the enamel, pyrophosphate reduces their ability to bind to proteins. It also has the ability to inhibit the formation of calcium phosphate. These are therefore: that the pyrophosphate introduced into the oral cavity through the toothpaste may influence the formation of the film. However, the P-O-P compound of pyrophosphate is known to be susceptible to enzymatic hydrolysis from plaques and salivary phosphates, and the effect may therefore be of limited duration in the oral cavity (14.) Consequently, tartar control toothpastes containing pyrophosphate as a calculation inhibitor also incorporate phosphate inhibitors that prolong the activity of pyrophosphate in the mouth. Studies have shown that fluorine in combination with PVM/MA Copolymer provides significant protection of pyrophosphate against phosphatase (22.) The clinical consequences of a poorly formed or partially missing film are not known. The suggested consequences are tooth abrasion, increased demineralisation and hypersensitivity of teeth (14). Zinc has anti-calculus effect because of its anti-plaque properties, but also it is thought to influence the formation of the calculation by inhibiting the growth of the crystal. Anti-tooth hypersensitivity agents Although the condition is indicated as identity hypersensitivity, it is not really the tooth that is sensitive. The sensitivity of the tooth is caused by tubes filled with fluid in communication with the pulp (14). Potassium ions are designed to act by blocking the action potential generation in intradental nerves (23.) It is claimed that potassium salts in dental preparations increase the concentration of potassium ions around the pulmonary nerves, and thus deport the nerve. This can inhibit a nervous response from various stimuli. Enzymatic toothpastes and co-formulants do not contain surfactants such as SLS because © the surfactant can distort enzymes. SLS can induce adverse effects in soft tissue oral and increases the frequency of ulcers in patients with recurrent ulcers (RAU). ulcers have generally been reported to be smaller and less to have a shorter healing time and the frequencies of afthous afthous episodes were decreased (24). Whitening agents, white toothpastes do not lighten the color of the teeth structure; They simply remove superficial spots with abrasives or special or polishing chemicals, or prevent stains. An abrasive is necessary for the effective removal of a discolored skin. Abrasives offer a significant whitening advantage, especially on smooth surfaces, but are of limited use for areas along the line of rubber and interpretation. Some whitening toothpastes contain coarse abrasives that can damage the dental tissue. Dimethylxanes are versatile substances ranging from low molecular weight polydimethylxane fluids to high molecular weight polymers similar to natural rubber. They cause a smooth surface on the tooth that prevents the formation of spots. Papain is a sulphid protease consisting of a single polypeptide chain, extracted from the papaya Charge plant (4). It is able to hydrolyze peptide ties, and can also catalyze the transfer of a group of aciles. It is used in toothpicks as a non-abrasive agent. It is known that toothpicks containing high concentrations of sodium bicarbonate are more effective in removing the intrinsic dental stain than those that do not contain sodium bicarbonate (25). Anti-alogistosis Bad breathing agents or alitosis come mainly from oral cavity. The unpleasant smell is due to the retention of anaerobic, gram-negative bacteria. These bacteria use sulphonated amino acids as substrates for their production of compounds containing volatile sulphur (VSC). VSC has a very unpleasant smell even in low concentrations. Zinc inhibits VSC production in the oral cavity by interacting with sulphur in amino acids or their metabolism. Zinc can be stored in the oral cavity for about two hours after tooth brushing by bindingacidic substances on oral mucosa, saliva or bacterial surfaces. To obtain the multi-claim products necessary for dental care It is necessary for the formulator to use a variety of different ingredients. This raises a number of demands on the development process. Innovations in pharmaceutical technology have contributed to the formulation of products with superior efficacy and other attributes that can contribute to clinical response and patient acceptability. Improved clinical efficacy and tolerability, together with conditioning signals, should encourage patient compliance with oral hygiene to further complement professional efforts aimed at disease prevention. (1) Winfield A.J., Richards R.M.E. Pharmaceutical Practice. Churchil Livingstone, Edunburgh, London, New York, Philadelphia, San Francisco, Sydney, Toronto: 1998. [Google Scholar] (2) Mitsui T. New Cosmetic Science. 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