

ALIEN PROPERTY CUSTODIAN

MOUTH WASHES

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Alien Property Custodian

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This invention relates to mouth washes and to a process for making same. Particularly it relates to mouth washes containing salts of ether carboxylic acids as lathering, emulsifying and dissolving agents.

The manufacture of mouth washes or gargles is usually carried out in such a manner that for the dissolving of ethereal oils, disinfecting agents, pigments and other additional materials alcohols are added which are partly or entirely soluble in water. Mouth washes of this kind show, however, the disadvantage, that the ethereal oils, owing to a partial evaporating of the alcoholic solvents, incline to precipitate. Besides the dilutions with hard waters made for use become easily turbid, particularly if ordinary soaps are added as cleansing and emulsifying agents.

Now it has been found that well lathering mouth washes are obtained by using as solvents for ethereal oils, disinfectants, pigments, etc. the water soluble salts of the carboxylic acids of the general formula $(R.O)_x.R'.COOH$. These mouth washes are free of alcoholic solvents and give, diluted with usual hard water, clear solutions. In the above noted formula R stands for any organic residue with not less than four carbon atoms which may be interrupted by hetero atoms or heteroatom groups and may be arranged cyclic, whereas R' means an alkylene residue which may be substituted, and x the numbers 1 or 2. The salts of these acids may be formed with alkali or earth alkali metals, ammonia, organic bases and other bases which are able to form water soluble salts with the acids.

Ether carboxylic acids of this kind are e. g. butyloxy acetic acid, i-amylloxy acetic acid, mixtures of alkoxy acetic acids obtainable from mixtures of alcohols obtained by reduction of first running acids of the paraffin oxidation or obtained as high boiling portions at the methanol synthesis, octyloxy acetic acid, dodecyloxy acetic acid, cyclohexyloxy acetic acid, tetrahydrofurfuryloxy acetic acid, phenoxy acetic acid, cresoxy acetic acid, aryloxy fatty acids alkylated or cycloalkylated in the nucleus, naphtenyloxy acetic acids, abietyloxy acetic acids, benzyloxy acetic acid, tetrahydromenaphthyloxy acetic acid, dioctyloxy acetic acid, α -heptyloxy propionic acid, β -octyloxy propionic acid, γ -octyloxy-iso-butyric acid, α -octyloxy capric acid and the like. Furthermore alkoxy fatty acids may be used, which are obtained from secondary alcohols by converting with halogen fatty acids, the alcohols being obtained from the first running acids of the paraffin oxidation with 7 to 9 carbon atoms by

ketonizing and subsequent hydrogenizing or such alkoxy fatty acids, which are obtained by reacting alcoholates of the primary alcohols C_7-C_9 with α -halogen fatty acids such as α -butoxy lauric acid, 6-hydroxy-n-hexyloxy acetic acid, methoxy-n-hexyloxy acetic acid and the like. Among these ether carboxylic acids the alkoxy and cycloalkoxy fatty acids are to be preferred.

Compared with the usual soaps which are added to the mouth washes as lathering and emulsifying agents, the salts of the aforesaid ether carboxylic acids have the advantage of a valuable dissolving action for ethereal oils, disinfecting agents, pigments, etc., and of a remarkable stability to hard water. Moreover they may be standardized not only against alkaline but also neutral or slightly acid reaction. Compared with the sulfonates of the castor oil, which sometimes are added to mouth washes, the salts of the ether carboxylic acids have the advantage of a good lathering effect and of an agreeable taste and moreover of a disinfecting and anticorrosive action.

Example 1

To 92 parts by weight of a 25% aqueous solution of the ammonium salt of the octyloxy acetic acid 5 parts by weight of peppermint oil, 1 part by weight of star anise oil, 0.5 parts by weight of cloves oil and 1.5 parts by weight of o-benzyl-p-chlorophenol are added. A mouth wash is formed which gives by dilution with water a clear, lathering liquid of a good cleansing effect and of an agreeable taste.

Example 2

25 parts by weight of cresoxy acetic acid are dissolved in 50 parts by weight of water. The solution is neutralized with ammonia water. Now 8 parts by weight of peppermint oil, 2 parts by weight of star anise oil and some drops of fennel oil are added. A mouth wash is obtained which gives by dilution with water clear solutions of good foaming properties.

Example 3

25 parts by weight of naphtenoxy propionic acid are dissolved in 140 parts by weight of water and are neutralized with ammonia. Hereupon 12 parts by weight of peppermint oil, 1.5 parts by weight of o-benzyl-p-chlorophenol and for coloring some cocheneillic red are added. The mixture may be diluted with water and forms an excellent mouth wash.

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