

ALIEN PROPERTY CUSTODIAN

THERAPEUTICALLY VALUABLE CALCIUM SALT DISSOLVED IN OIL AND A PROCESS FOR THE PRODUCTION THEREOF

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The invention relates to a therapeutically valuable calcium salt of a specific naphthenic acid separated from the crude naphthenic acids and dissolved in oil. The material known as crude naphthenic acid consists of a mixture of several acids, one of them showing the property of forming a precipitate by the action of dry ammonia gas on it in a solution of ethyl ether and this is a proved test for that acid.

It has been found that the solution of the calcium salt of the said naphthenic acid in oil is of considerable value for the treatment of catarrhal diseases.

For the treatment by injections solutions of the said calcium salt in vegetable oils (e. g. sesame or olive oil) and for external treatment solutions in mineral oils (e. g. paraffin oil) are used.

Preferably the solution of the said calcium salt in vegetable oil contains also other substances being therapeutically valuables for the treatment of catarrhal diseases e. g. camphor, menthol, quinine, etc.

For external treatment a solution of 1% of the said calcium salt is used in paraffin oil.

An advantageous composition for injections contains:

	Grammes
The said calcium salt -----	0.60
Sesame or olive oil -----	5.90
Eucalyptus oil -----	2.00
Oleic acid -----	0.20
Menthol -----	0.75
Camphor -----	0.25
Quinine -----	0.30

In the process according to the invention crude naphthenic acid is esterified by any known method and the ester of the specific acid showing the said test-reaction with dry ammonia gas is separated by fractionated evaporation. The separated ester is then saponified and a solution of a water soluble calcium salt (e. g. CaCl_2) is added to the pure solution of the saponified ester, the latter being converted thereby to a precipitate consisting of the calcium naphthenate aimed. The precipitate is separated, washed and dissolved in oil.

Preferably the crude naphthenic acid is converted into a mixture of the methyl esters of the components, the mixture being then fractionated between 200 and 250° C. The separated fraction is subjected to a further fractionation between 220 and 235° C and consists the latter fraction

practically of the methyl ester of the naphthenic acid the calcium salt of which is to be produced. The ester is saponified and converted to the said calcium salt by the action of CaCl_2 .

The said calcium salt is dissolved in vegetable oils preferably at 130° C.

Example

To 1850 grammes of a water-free crude naphthenic acid 1850 cubic centimetres of absolute methyl alcohol are added. The solution is cooled by ice and saturated with dry HCl gas and left to stand overnight. The alcoholic solution is separated from the oil, the solution is diluted with a four or five fold quantity of water, the oil separated thereat is added to the oil already separated and is washed four or five time with 1-1 litre of water. The obtained quantity of about 1200 grammes of methyl esters are fractionated and the fraction between 220 and 235° C of about 800 grammes is separated. This fraction is subjected to a further fractionation between 200 and 235° C and a product of about 450 grammes is obtained consisting practically only of the methyl ester of the naphthenic acid aimed the free acid showing in a solution of absolute ether the test reaction with dry ammonia gas. 460 grammes of this ester are boiled with a solution of 190 grammes of KOH in a mixture of 330 cubic centimetres of water and 330 cubic centimetres of ethyl alcohol on a water bath during 5 to 6 hours and then diluted with 6 to 7 litres of water. The solution is left to stand for a day and after being clarified a further quantity of water is added until no further muddiness is caused. The whole is then filtered and a solution of 20% CaCl_2 is added in abundance. The whole is left to stand for a day and the precipitate is washed with water. The precipitate is then picked up with ether, washed with water two or three times, the ether is evaporated and the salt dried.

For injections 0.6 grammes of the calcium salt obtained are dissolved at about 130° C in 5.90 grammes of sesame or olive oil and a mixture of 2.00 grammes of eucalyptus oil, 0.20 grammes of oleic acid, 0.75 grammes of menthol, 0.25 grammes of camphor and 0.30 grammes of quinine are added.

For external treatment a quantity of 1% of the calcium salt obtained is dissolved in paraffin oil.

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