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VEDICON
Josef Deutsch
Lindegg 74
8283 Blumau
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Tel/Fax: 00 4333858335

Oslo, 21.12.1998

TESTING OF CITROSEPT

Dear Mr. Deutsch,

Enclosed you will find the test on Citrosept in regards to Benzethoniumchloride executed by MATFORSK, which is the main food research institute in Norway.

Mr. Gjermund Vogt, who was in charge of the test, concluded that if there is any Benzethoniumchloride at all in Citrosept, the maximum may be 100 ppm (parts pr. million), which he also confirmed is an insignificant amount constituting less than 0,1 percent of the total content.

For and on behalf of Cintamani International, I remain,
Yours sincerely,

Ole Petter Høie
President

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SENDT AV [illegible]

SERVICE REPORT
Contract Work

Report no.:
O-7892-1-English

MATFORSK
Norwegian Food Research Institute

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Accessibility:
Confidential

Report title:	**Date:**
Analysis of grapefruit seed extract	11.12.98
Head of project / Author:	**Signature:**
Gjermund Vogt	
Head of department:	**Signature:**
Asbjørn Landberg	
Department:	**Contract registration:**
Food product and raw materials	O-7892
Name of client:	**Client's reference:**
Cintamani Norway AS	Bjarne Trøften

Abstract:
In agreement with Mr Bjarne Trøften, Cintamani Norway AS, analysis of benzethoniumchlorid and benzalkoniumchlorid has been carried out on Citrosept and Citropure. The method used is based on information from Cintamani Norway AS as a copy from a report from Middlesex University Services Limited. The report refers to a fluorescence- and UV-method for detecting these specific components.

We were not able to analyse Citrosept due to problems with a possible high level of emulsifying agents.

The used method based on fluorescence and UV spectroscopy. The method gave no indication of benzethoniumchlorid and benzalkoniumchlorid.

MATFORSK - Norwegian Food Research Institute

In agreement with Mr Bjarne Trøtten, Cintamani Norway AS, analysis of benzethoniumchlorid and benzalkoniumchlorid has been carried out on Citrosept and Citropure. The spectroscopic method used is based on information from Cintamani Norway AS, which sent a copy of a report from Middlesex University Services Limited. The report refers to a spectroscopic fluorescence- and UV-method for detecting these components. The method presented in the report was not complete and was therefore further developed at MATFORSK before use.

Analysis

30 ml of Citropure were mixed with 15 ml chloroform(A) or petroleumether(B) on a magnetic stirrer for 60 minutes at room temperature.
The organic phase was separated and evaporated with a rotavapour.
The evaporated sample was resolved in 10 ml of distilled water before it was measured in UV- and fluorescence-spectrophotometers.
The samples were tested against benzethoniumchlorid and benzalkoniumchlorid external standards in concentration of 1, 10 and 100 ppm in distilled water.

Results

With the external standards it was possible to measure benzethoniumchlorid and benzalkoniumchlorid down to 1 ppm which was the detection limit.
Extracts from Citropure(A and B) did not give significantly higher responses than the detection limit. When we added benzethoniumchlorid and benzalkoniumchlorid to the Citropure extract, we got a slight increase in absorbance, but it was much lower than expected, only 10%. It seems that something in the Citropure extract interferes with the measurements. An explanation can be that benzethoniumchlorid and benzalkoniumchlorid interact with some components in the Citropure extract and give wrong results about the concentration.
Our result shows that benzethoniumchlorid and benzalkoniumchlorid did not exist in the Citropure using this spectroscopic method.