

**Chemistry – Food Chemistry**

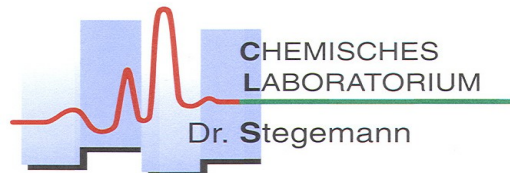
**Biochemistry – Microbiology**

**Material Testing - Expert Opinions**

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*From the chamber of commerce publicly appointed and sworn court-appointed expert for chemistry, chemistry of waste, physical and chemical tests of synthetic materials, oils, building materials and corrosion*

Authorized chamber of Commerce:  
Osnabrück-Emsland-County Bentheim

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Water-Waste Water-Drinking Water -Technical  
Water-Groundwater-Soil-Food-Hygiene-Objects of  
Daily Use-Industrial Waste-Advisory Service in  
Waste Water Disposal-Material Testing-  
Court Experts Evidence for Material Damages-  
Expert Opinions on Emission Control

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31.03.2023/st

### **Clearance certificate for Hecosol TiOSEPT coating**

Hecosol GmbH submitted the composition of the TiOSEPT coating to me with the request to examine this.

The silver-based coating consists mainly of a silane-based binder. It contains no toxic compounds.

Legal regulations, or specific measures according to REGULATION (EC) No. 1935/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 October 2004 concerning *materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC here: Annex 1, entry 13 'Silicones'*, do not yet exist.

There are therefore no limits for the migration of certain substances from silane/silicone coatings and the underlying contact conditions.

The specific measure for *plastics that come into contact with food*, Regulation (EU) No. 10/2011, also states in Article 2(2) that this Regulation does not apply to rubber and silicones (silanes) that come into contact with food.

In accordance with the only existing specific measure, Regulation (EU) No. 10/2011 for *plastics* (Annex 1, entry 10 of Regulation (EC) No. 1935/2004), we nevertheless tested the coating in the laboratory with regard to its migration behaviour and stability so as to get an indication of its suitability for foodstuffs. After a contact time of 10 days at 40°C (global migration) and two hours at 90°C (specific migration of silver), we were unable to detect any migration in any of the simulants for aqueous, acidic and fatty foodstuffs.

The coating was tested on both glass and polyethylene.

According to our calculations, the coating is suitable for hot counters, refrigerated counters and refrigerators.

Dr. Dirk Stegemann

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Continuation of Report No. **Hecosol\_Thiosept\_e** from 27.10.11