

## **Siloxanes in the Nordic Environment (TemaNord 2005:593)**

Siloxanes belong to a group of substances used in a number of industrial applications and in consumer products such as additives in fuel, car polish, cleaners, anti foamers and car waxes. Besides this, they are widely used in e.g. personal care and biomedical products. As a result of their wide use, siloxanes are presumably spread into the environment both via point sources and via diffuse sources and may be found in the environment. Recent studies have suggested that siloxanes may have direct or indirect toxic effects on various biological processes.

The aim of this screening study was to obtain a snapshot of the occurrence of siloxanes in the Nordic environment. The here presented screening study involved six countries: Denmark, Faroe Islands, Finland, Iceland, Norway and Sweden. Sampled media types were air, biota, sediment, sludge, soil and water.

Siloxanes were found in all the analysed samples types except soils. The results indicate that there is a general pollution of siloxanes in the Nordic environment, close to dense population and major sources. There was, however, a great variation in concentrations. The cyclic siloxanes occurred in all media in significantly higher concentrations than the linear siloxanes. At present, the observed concentrations are not alarmingly high, and many background sites seem to be non-contaminated. However, the use of siloxanes is extensive and it is possible that continued use will lead to increased environmental levels, eventually reaching effect concentrations.

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