RVC-application A-1016

Catchwords: environment, lipophilic compounds, DIN-38409 part 17, extraction, hexane

Determination of hardly volatile lipophilic compounds analog DIN-38409 part 17 in industrial wastewater

Application:

Industrial wastewater is extracted with liquid-liquid-extraction with hexane after acidification to pH 1-2. Afterwards the dried organic phase is accumulated using the RVC for the following gravimetric determination. One works analog to DIN-38409 part 17, in doing so one replaces the extraction agent 1,1,2-trichlorotrifluoroethane with hexane.

Specification:

Model:	Alpha RVC
Vacuum pump:	Membrane-vacuum-pump MZ 2C
Liquid phase:	Hexane
Boiling range of the accumulation phase:	(cp. 69 °C)
Type of tube:	50 ml glass-centrifuge tube
Starting volume of the sample:	approx. 25 ml
Final volume of the sample:	till entire dryness
Number of test tube per run:	up to 10
Temperature:	40 °C
Vacuum:	70 mbar
Time:	approx. 75 min

Result and notes:

The time of the drying depends on the kind of the samples, how many and which type (oil, fat, wax, emulsifier) of lipophilic compounds are in the sample. Of a thick layer of lipophilic compounds remains in the end of the drying, it'll probably need more time to remove the hexane out of it.

Also the quantity of hexane that is used for the extraction has to be adapted to the quantity of lipophilic compounds. For this reason the volume of the hexane varies in the beginning.