RVC-application A-1014

Catchwords: microbiology, fungus mycelium, metabolite-analytics, extracts, preparative HPLC, acetonitrile, combination with rotating evaporator, methanol, 2 ml

Evaporation after preparation within the analysis of metabolite out of biological population of fungi

Application:

Preparative HPLC of refurbished extracts of populations of fungi with gradient acetonitrile-water. Evaporation of the mobile phase of the collected fraction in the RVC, quantitative determination of the metabolite-fractions, resumption in a bit acetonitrile for analytic.
In case of bigger volumes, especially bigger hydrous parts, it should first evaporate in the rotating evaporator, and then be resumed in 1-2 ml methanol or acetonitrile and be decanted in 4 ml vials. Evaporation in the RVC, there is a detailed, quantitative determination possible, as described before.

Specification:

Model:	RVC 2-25 CD
Vacuum pump:	Vacuum-chemistry-membrane pump MZ 2C
Liquid phase:	Methanol, water, Acetonitrile
Boiling range of the accumulation phase:	(cp. 65/100/82 °C)
Type of tube:	Supelco 4 ml vials
Starting volume of the sample:	2 ml
Final volume of the sample:	till entire dryness
Number of test tube per run:	1 – 30
Temperature:	40 – 50 °C
Vacuum:	
Time:	with pre-treatment with RV: LM methanol- circa 20 min

Result and notes:

The evaporation-time varies according to volume, the percentage of water and the moment of the fraction and the appropriate mobile phases in the gradient-run. We have no problems that substances volatilize or get instable.
In case of bigger volumes, especially bigger hydrous parts, the samples are evaporated in the rotating evaporator as an intermediate step. The evaporated extract with methanol is collected and filled in the vial (weighted empty) because the quantitative determination (e.g. just 2 mg) would be too imprecise in the tube. The quantitative determination can take place after the evaporation of the solvent in the RVC before one goes on with the analytic.
See therefore also A-1013 and A-1015 for further procedure.