

FD-Application FD-LS-117

Catchwords: Life Science, peptides, proteins, sample preparation by HPLC, acetonitrile-water, organic solvent, NMR, crystallography, flask-drying, Eppendorf-vials and Falcon Tubes in wide neck filter bottles

Lyophilization of proteins and peptides by HPLC purification

Application:

Drying of peptides after purification of peptides by HPLC fractionation, subsequent analysis, e.g. Crystallography or NMR measurements

Process technology (summary):

• Product designation	Peptides
• Type of solvent, ca. percentage of dry matter	Water/acetonitrile (up to 80 % acetonitrile), Dry matter content is very low, not determined in detail
• Type of vessel, number of samples, volume per sample	Round bottles, wide neck filter bottles, Eppendorfcaps, 15-, 50-ml Falcon tubs or similar in wide neck filter bottles , 11 samples/run
• Type of machine / configuration	GAMMA 2-20 with manifold
• Freezing (place, range of temperature, freezing point)	In liquid nitrogen
• Process flask-drying /inside /outside /Epsilon*	Flask-drying
• Vacuum main-drying (final vacuum or controlled)	0.04 mbar
• Temperature of shelf, program mode?	-
• Time duration of main drying (T_{sf}/t)	Varies
• Final-drying? Vacuum?	no

Result and comments:

Use of the device by many employees from different working groups;
The device is in continuous operation individual vessels are individually switched on and suspended, deicing about 1/month

*explanation

Process inside	(Freezing and) drying inside the ice condenser chamber
Process outside	Freezing separately (e.g. freezer), drying outside the ice condenser chamber, e.g. with acrylic chamber
EPSILON	Type of machine with rectangular product chamber, front loader