

Solid Sample

Dry injection



Allows large sample amounts

High pressure dry-load



Dry-load columns for solid deposits allow the injection of an insoluble (or soluble) raw sample in the mobile phase. Compared to liquid injection, the solid deposit avoids the diffusion of the raw sample in the purification column. It improves resolution, efficiency and purity of the products collected.

The solid deposit can be made with silica, C18 or Celite. Unlike open cartridges, it does not require the use of a piston or specific adapters.

The max. pressure is 2x the standard solid deposit cartridges.

They are compatible with the use of Interchim® 15 µm puriFlash® columns and with all purification systems.

puriFlash® Dry-Load

Nature	Type	Format	P/N	Qty	
puriFlash® Dry-Load	Empty	F0004	PF-DLE-F0004	20 u	
		F0012	PF-DLE-F0012	20 u	
		F0025	PF-DLE-F0025	20 u	
		F0040	PF-DLE-F0040	20 u	
		F0060	PF-DLE-F0060	10 u	
		F0080	PF-DLE-F0080	5 u	
		F0100	PF-DLE-F0100	5 u	
		F0120	PF-DLE-F0120	5 u	
		F0220	PF-DLE-F0220	5 u	
		F0330	PF-DLE-F0330	5 u	
		puriFlash® Dry-Load - Tightening tool		JV0470	1 u
		puriFlash® Dry-Load	SILICA HC 80%	F0004	PF-DLE-F0004
F0012	PF-DLE-F0012			20 u	
F0025	PF-DLE-F0025			20 u	
F0040	PF-DLE-F0040			20 u	
puriFlash® Dry-Load	SILICA HC 50%	F0004	PF-DLSIHC05-F0004	20 u	
		F0012	PF-DLSIHC05-F0012	20 u	
		F0025	PF-DLSIHC05-F0025	20 u	
		F0040	PF-DLSIHC05-F0040	20 u	
puriFlash® Dry-Load	CELITE 80%	F0004	PF-DLCET08-F0004	20 u	
		F0012	PF-DLCET08-F0012	20 u	
		F0025	PF-DLCET08-F0025	20 u	
		F0040	PF-DLCET08-F0040	20 u	
puriFlash® Dry-Load	C18 STD 80%	F0004	PF-DLIRC1808-F0004	5 u	
		F0012	PF-DLIRC1808-F0012	5 u	
		F0025	PF-DLIRC1808-F0025	5 u	
		F0040	PF-DLIRC1808-F0040	5 u	
puriFlash® Dry-Load	C18 STD 50%	F0004	PF-DLIRC1805-F0004	5 u	
		F0012	PF-DLIRC1805-F0012	5 u	
		F0025	PF-DLIRC1805-F0025	5 u	
		F0040	PF-DLIRC1805-F0040	5 u	

High-Pressure Dry-Load

Nature	Type	Format	P/N	Qty
puriFlash® HP Dry-Load	Empty	50 x 21.2 mm	OA0320	1 u
		75 x 21.2 mm	OA0330	1 u
		100 x 21.2 mm	7A1870	1 u
		50 x 30 mm	OA0340	1 u
		75 x 30 mm	OA0350	1 u
100 x 30 mm	7A1880	1 u		
puriFlash® Dry-Load - Tightening tool				
Spanner wrench for 21.2 mm ID			7A1590	1 u
Spanner wrench for 30 mm ID			7A1610	1 u
Replacement frit				
Replacement frit for 21.2 mm ID			OA2100	1 u
Replacement frit for 30 mm ID			OA2110	1 u





Dry-Load Injection

The dry-load injection is a convenient technique when the polarity of the reaction mixture or extraction is close to the polarity of the stationary phase or, when it contains solutes with extreme opposite polarity.

It should also be consider when:

- The compound of interest is retained more than the other compounds we want to separate.
- The sample contains one or several compounds having low solubility with the eluent.

Compared to liquid injection, the dry-load injection improves efficiency, resolution and final purity.

Sample in solution

Injection Loop



Limited injection volume due to sample solubility

SOLID SAMPLE

Dry injection



High pressure dry-load

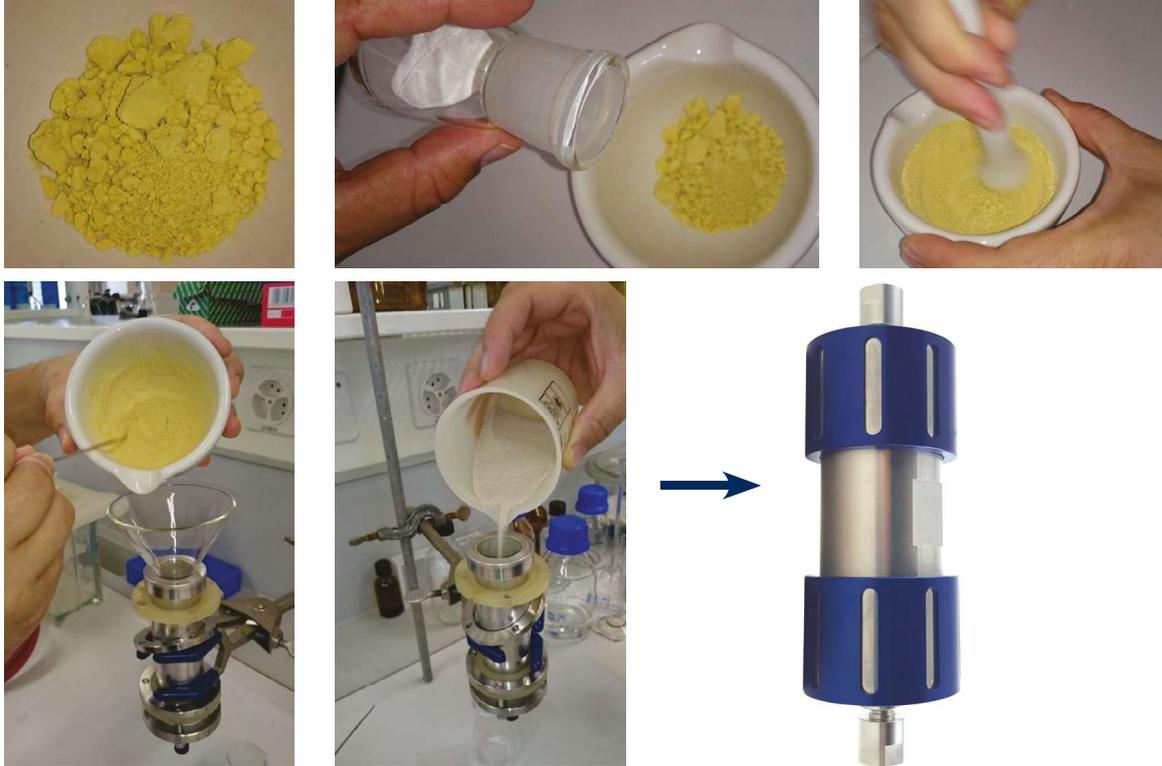


Allow to large sample amounts





How to prepare the Dry-load cell for injection



1. Adsorb the dissolved sample in the "better solvent" on a small amount of stationary phase (Silica, C18 or Celite).
2. Evaporate the solvent with a rotary evaporator until a "dry" powder is obtained. Note: If the volume of the dissolved sample is small, it can be poured onto the silica, and the partially impregnated silica mixed up to obtain a homogeneous dry powder, thus avoiding the passage to the rotary evaporator.
4. Place the mixture over the inlet frit of the column, once it has possibly been equilibrated with the elution solvent.
5. Add a sintered frit over the mixture, then a closure system or the piston of the column (for equipped systems) and slightly tamp the mixture to obtain a perfectly homogeneous deposit thickness.
6. Proceed with elution.

TECHNICAL TIP

The volume of the dry-load must not exceed 5% to 10% of the purification column volume to keep sufficient resolution between fractions.

If possible, wet the dry-load with 100% of the less eluent solvent before to start the purification run.

Caution: Adapt your step in function of the back pressure and the acceptable flow rate.

The dry-load can generate air bubbles creating disruptions that hide the first peaks. (UV detector)

Celite exhibit advantages:

- It does not generate back pressure due to its large particle size
- It does not interact with the compounds that arrive at the same time at the top of the column
- It improves separation and is compatible with both NP and RP mode