

Dispensing Disk Set

The large dispensing head comes with a sampler of 11 pre-calibrated dispensing disks (its dosing element) covering the volumetric dose range of 7mm³ - 8000mm³. This range corresponds to single dose sizes of about 2mg – 15g (depending on bulk densities; see below).

The disks can be swapped readily in the dispensing head (see user manual pages 17 of SDH-1 and page 16 of the SDB-1).

Disk		1	2	3	4	5	6	7	8	9	10	11
Volume		7mm ³	30mm ³	75mm ³	105mm ³	265mm ³	625mm ³	945mm ³	1940mm ³	3640mm ³	5550mm ³	8000mm ³
Example Material A: Bulk density 0.3g/ml	1x dose:	2.1mg	9mg	22.5mg	31.5mg	79.5mg	187.5mg	283.5mg	582 mg	1.09g	1.67g	2.4g
	2x dose:	4.2mg	18mg	45mg	63mg	159mg	375mg	567mg	1164 mg	2.18g	3.33g	4.8g
	3x dose:	6.3mg	27mg	67.5mg	94.5mg	238.5mg	562.5mg	850.5mg	1746 mg	3.28g	5.0g	7.2g
Example Material B: Bulk density 0.7g/ml	1x dose:	4.9mg	21mg	52.5mg	73.5mg	185.5mg	437.5mg	661.5mg	1.36g	2.55g	3.89 g	5.6g
	2x dose:	9.8mg	42mg	105mg	147mg	371mg	875mg	1.32g	2.72g	5.1g	7.8 g	11.2g
	3x dose:	14.7mg	63mg	157.5mg	220.5mg	556.5mg	1,31g	1.98g	4.07g	7.64g	11.66 g	16.8g
Example Material C: Bulk density 1.0g/ml	1x dose:	7mg	30mg	75mg	105mg	265mg	625mg	945mg	1.94g	3.64g	5.55g	8.0g
	2x dose:	14mg	60mg	150mg	210mg	530mg	1,25g	1.89g	3.88g	7.28g	11.1g	16.0g
	3x dose:	21mg	90mg	225mg	315mg	795mg	1.88g	2.84g	5.82g	10.92	16.65g	24.0g
Example Material D: Bulk density 1.9g/ml	1x dose:	13.3mg	57mg	142.5mg	199.5mg	503.5mg	1.19g	1.80g	3.69g	6.92g	10.54g	15.2g
	2x dose:	26.6mg	114mg	285mg	399mg	1.01g	2.38g	3.60g	7.37g	13.83g	21.09g	30.4g
	3x dose:	39.9mg	171mg	427.5mg	598.5mg	1.51g	3.56g	5.39g	11.06g	20.75g	31.64g	45.6g

With this array of swappable dispensing disks, a multitude different dose sizes becomes available by switching disks in the dispensing head as well as selecting multiple shots of the single dose value.

More detailed information (including calculators to convert to dose sizes in mass) can be found here:

<https://xqinstruments.com/dispensing-solutions/#methods-applications>

The dispensing disk sampler allows experimenting with different dose volumes and multiple dose shots to obtain the desired results. This can help if the bulk density of the material is not established and samples cannot be made available to XQ Instruments for calibration.

For specific dose volumes which are not falling exactly onto one of these dispensing disk sizes, we continue to offer custom calibration of dispensing disks to any specific volume in the range, and these disks come with testing and calibration certificate.