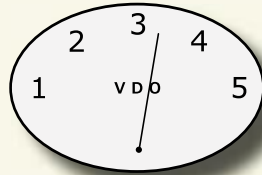


Dear customers,

The technique in laboratory and analysis made an enormous development in the last decades. You have probably been all affected by or even participating in this progress. Methods of analysis supply accuracies in the nano-range which would have seen as utopian 50 years ago. In particular digitization and computerization made a substantial contribution to this.

Please you make yourselves aware on the basis of a simple example: displays



analogous display



digital display

In former times the above shown analogous displays were the only way to display measured values. They brought the difficulty of calibration of the whole measuring range as well as in-accuracy when reading-off.

The human factor

As experience shows the above analog display is interpreted within an range from 3,0 to 3,6. This is because of the different eyes of the viewers and naturally also because of the viewing angle. In contrast the digital display is interpreted alike by all humans, thus as 3,276. A value, - the correct calibration presupposed - is clearly more exact than the analog reading value.

Digitization

The human factor proved to be rather disturbing and the digitization therefore has its right of existence although in nature it does not occur. No natural value is either „0“ or „1“. Thus the efforts in the analytical and laboratory technology are to minimize the human factor and to increase the accuracy. By any means this does not mean that no more errors may be made, but that processes become more and more fault-tolerant.

Your analyses are good - but what about your samples?

Our contribution to improve or to standardize the quality of the samples, which represent the basis for each investigation are the products in this catalog. They are to help you to facilitate your daily work in order to obtain improved and more constant results.

If you miss any products our assortment please let it us know. Your needs are always in the focus of our acting, and we will be endeavored to create remedy.

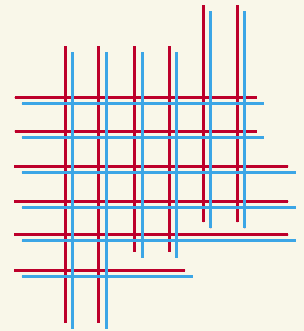
—	Content	
■	Samplers for liquids	4
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Dippers



For liquids

Dippers are essential for sampling liquids. Very important is the material that must be resistant to the sampled liquid.



Stainless dipper

A high quality crevice free ladle suitable for a wide range of applications. Available in two versions:
100ml (suitable for closed top drums with 2" bungs)
250ml

Art. No.	Product	Volume [ml]
312.120	Dipper 100 ml V4A *	100
312.250	Dipper 250 ml V4A	250

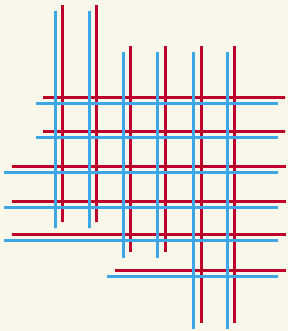
Chemical dipper (polypropylene)

Ideal for aggressive chemicals except petrochemicals and solvents.
Available in 3 sizes
Length of handle 100cm
Autoclavable



Art. No.	Product	Volume [ml]
312.0250	Dipper PP 250 ml	250
312.0600	Dipper PP 600 ml	600
312.1000	Dipper PP 1000 ml	1000

Pump sampler



For liquids

This hand operated device pumps the liquid from depths up to 5 meters directly into the 50ml or 150ml sample bottle.
 The liquid is only in contact with tube and bottle (both polyethylene)
 Special feature : Bottles are in letter box format - only 30mm thick.



Application

According to operation target, average samples can be withdrawn.
 The pump sampler can be used on different types of containers. tanks etc. for all media that are not aggressive to the material of tube and bottle. (Polypropylene) Depending on the specific weight of the media different depths can be realized with water it is about 5 meters.
 The device can also be used for polluted liquids and sediments. These are just sucked in.
 The Pump sampler can be used on all different types of containers, tanks etc. with the tube (diameter 12mm)

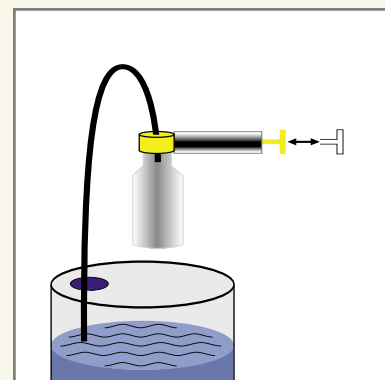


150 ml bottle in letter box format

Operation

Using the pump will generate a vacuum in the bottle. Via the tube the liquid is sucked into the bottle. Hence the media is only in contact with bottle and tube.

After use the tube can be either disposed of or cleaned for continued usage.



Set consisting of

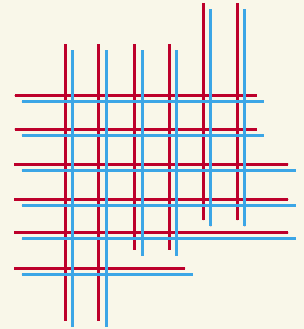
Pump sampler in transport case, 10m of PE-tube, 1 tube cutter, 20 sample bottles PE 50ml or 14 sample bottles PE 150ml.



Further informations about operation at www.gmp-sampling.com

Art. No.	Product
315.050	Set Pump sampler case with 20 PE bottles 50 ml
315.150	Set Pump sampler case with 14 PE bottles 150 ml
315.005	Spare bottles 50 ml (Pack of 10 bottles)
315.015	Spare bottles 150 ml (Pack of 10 bottles)

Dip sampler



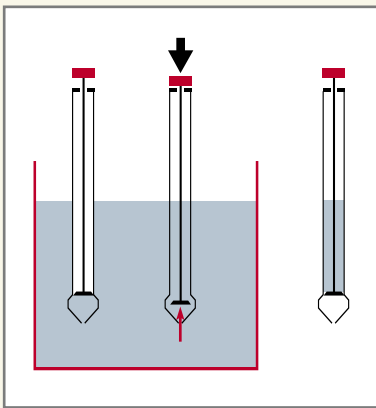
Our most popular devices for sampling liquids as they allow extraction of samples from different kinds of containers. Depending on the operation they can be used for sampling coating phases (e.g. oil) or explicit transition of phases. Please respect the material of the sampler to be used on your individual liquid.

The following devices are available in three different materials:

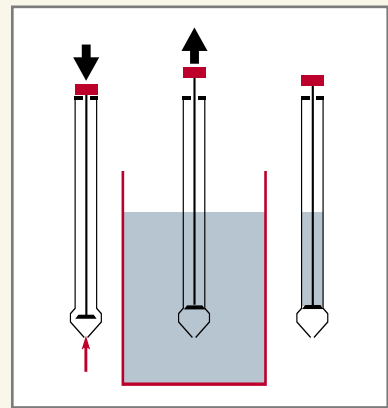
- Polypropylene (PP):
for aggressive media like acids
- PTFE / FEP:
for ultra pure sampling
- Stainless Steel (AISI 316L):
for solvents

Operation

- ① Target sampling: The sampler is immersed into the liquid first then the valve button is pushed. The sampler is filled at the target.
- ② Average sampling: For an average sample the button is pushed first and the sampler will be immersed into the liquid. The sampler is filled during immersing into the liquid.



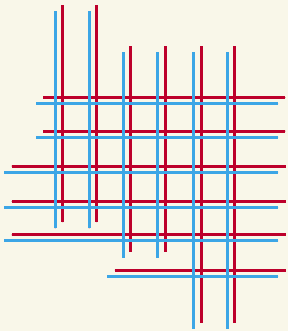
①



②



Further information about operation at www.gmp-sampling.com



Suitability

Dip samplers can be used in all kinds of liquids according to their material resistancy. The containers must have an opening of at least 35mm to insert the sampler.

For liquids



Allows average or target sampling of liquids in barrels, containers, tanks etc.

Art. No.	Product	Length [cm]	Volume [ml]
314.100p	Dip sampler PP	100	300
314.200p	Dip sampler PP	200	600
314.100t	Dip sampler PTFE	100	300
313.100p	Dip sampler, stainless steel	100	300
313.150p	Dip sampler, stainless steel	150	450
Accessories			
288.25-60	Cleaning brush Ø 25 mm, stainless steel	60	

Disposable dipper

HDPE or glass

Simple and economic device for sampling liquids in barrels etc.

Available sterile.

Low cost, simple to use.

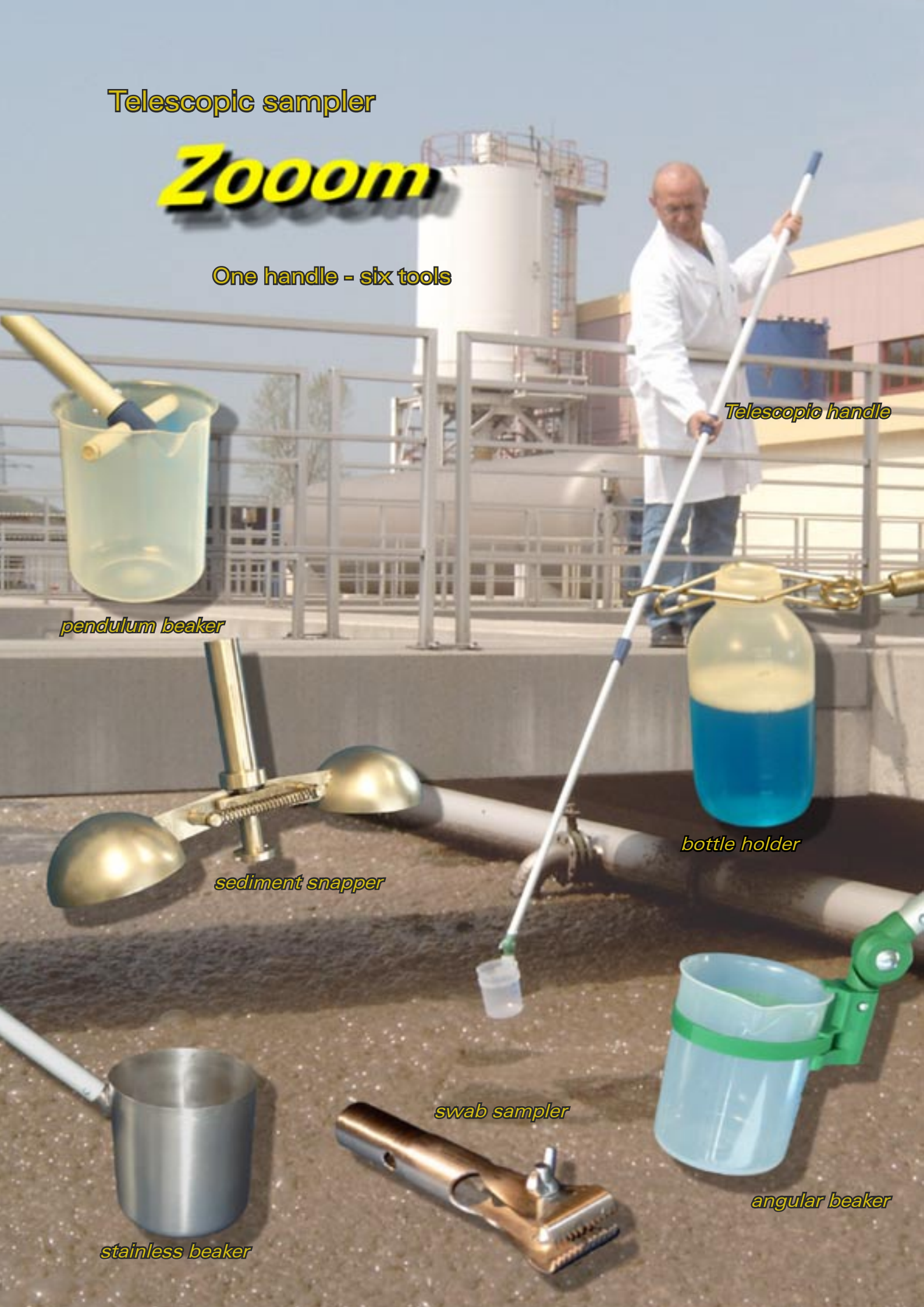


Art. No.	Product	Length [cm]	Volume [ml]
309.100	Disposable dipper HDPE	100	275
309.075	Disposable dipper HDPE	75	175
313.0100P	Disposable dipper HDPE, non-sterile, 50 pieces	100	diameter 12 mm
313.0100PS	Disposable dipper HDPE, sterile. 50 pieces	100	diameter 12 mm
313.0100G	Disposable dipper Glass, non-sterile, 50 pieces	100	diameter 12 mm
313.0100GC	Disposable dipper Glass, precleaned, 50 pieces	100	diameter 12 mm

Telescopic sampler

Zoom

One handle - six tools



Telescopic handle

pendulum beaker

bottle holder

sediment snapper

swab sampler

angular beaker

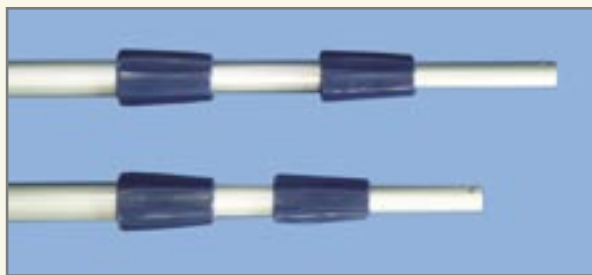
stainless beaker

Telescopic sampler *Zoom*

Sampling from distance

This sampler is suitable for taking samples from distant places such as wells, chutes, rivers, lakes etc.

Due to the modular construction and the snap-in connection system different tools can be attached on the telescopic handle. Telescopic Sampler „Zoom“ is consisting of the following options:



Telescopic handle

Heavy duty quality. Made of Aluminium.

Art. No.	Product	Length from...to... [m]
319.250	Telescopic handle	1,25 - 2,50
319.300	Telescopic handle	1,00 - 3,00
319.450	Telescopic handle	1,50 - 4,50

Pendulum beaker (PP)

Available in three sizes: 600, 1000 and 2000 ml. Ideal for water sampling in narrow wells and chutes. Is always commuting up-side up.



Art. No.	Product	Volume [ml]
323.0600	Angular beaker (PP)	600
323.1000	Angular beaker (PP)	1000
323.2000	Angular beaker (PP)	2000

Angular beaker (PP)

This device is resistant against acids and alkali and is suitable for a wide range of applications. Made of polypropylene -autoclavable.



Art. No.	Product
318.600	Angular beaker (PP)
318.1000	Angular beaker (PP)
318.2000	Angular beaker (PP)

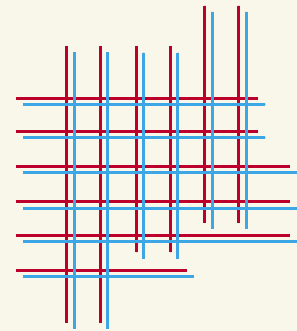
Stainless beaker

When to hot or gruffy for plastic we recommend the stainless steel beaker.



Art. No.	Product	Volume [ml]
317.1000	Stainless beaker	1500

Telescopic sampler *Zoom*



Bottle holder

A strong spring clamp holds a standard laboratory bottle with GL45 thread (e.g. Schott Duran). By pressing the spring the bottle can be removed easily. This bottle holder can also be used with other bottles with neck sizes between 30-55mm. Flame sterilizable for maximum hygienic.

The bottle holder is shipped either with Duran bottles (500 and 1000ml), Duran bottles with breakage protection or PP bottles (all are autoclavable).

Art. No.	Product
316.500	Bottle holder stainless steel with bottle (PP) 500 ml
316.1000	Bottle holder stainless steel with bottle (PP) 1000 ml
320.500	Bottle Schott Duran 500 ml
320.1000	Bottle Schott Duran 1000 ml
321.500	Medium neck bottle PE 500 ml
321.1000	Medium neck bottle PE 1000 ml

Snapper

When touching the ground or the product the sample is captured inside the two hemispheric bowls.

The device can also be used with the optional lowering device for use with a rope or a cable. For very soft substances that do not have sufficient resistance a second cable can be used to initiate the mechanism. Ideal for sediments and far locations.

Made of stainless steel AISI 304,
Capacity ca. 260 ml

World novelty!



Art. No.	Product
318.000	Sediment snapper

Swab Sampler

For Swab-Tests. An adjustable clamp securely holds a cloth or a pad and allows the withdraw of swab samples. E.g. for checking the clean processes in mixing vessels.

Stainless steel AISI 316, autoclavable

World novelty!



Art. No.	Product
319.002	Swab sampler

World novelties

GMPSAMPLING

presents

Bulk sampler
BULKY
stainless steel
(Page 17)

Bulk sampler
ANGER stainless steel
(Page 17)



Sediment snapper, stainless steel
(Page 10)



Swab sampler, stainless steel
(Page 10)

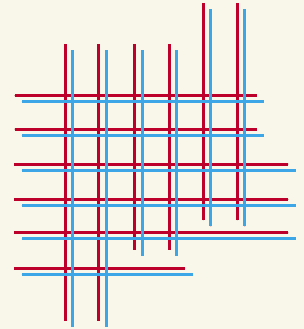
Dipping bottles & sediment sampler

Dipping bottles for sampling liquids

acc. DIN 51750 and DIN 53242

For the withdraw of samples from tanks or tank wagons dipping bottles are commonly used. They can be lowered into the liquid with a rope or a chain.

Depending on the liquid type it is important to avoid electrostatic charge and striking light.



Dipping bottle EX M20



Made of material that does not cause a spark.

diameter ca. 80 mm
height ca. 350 mm

Operation: After lowering the bottle into liquid the bung is pulled with a hitch. The liquid is entering the bottle

Immersion cylinder M22



Dipping bottle with stop cock



The sample can easily be filled in a suitable container using the integrated stop cock.

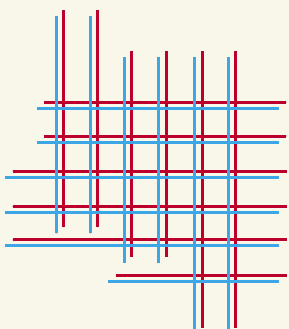
Made of material that does not cause a spark.

Capacity 100 ml (acc. to DIN 51750)

Acc. to DIN 51750, brass, nickle plated.

Using a second rope or cable enables the user to open the valve at the desired depth. Otherwise ground contact will open the valve.

Sediment sampler with lowering device



World novelty



Hemispheric bowls close with a snap when touching the ground. This operation collects the sample. The Sediment sampler can be used with telescopic rods or the optional lowering device. For sampling substances that do not have a sufficient hardness a separate cable can be used to activate the mechanism. Ideal for sampling sediments in deep liquids. Made of stainless steel, Capacity ca. 260ml.

Dipping bottle M21



Acc. to DIN 51750
Stand made of brass, nickle plated.
Bottle from glass

Hand reel



The small hand operated reel holds 30 metres of steel cable and can be used for lowering dipping bottles etc. into the liquid. Made of steel, handhold from plastics

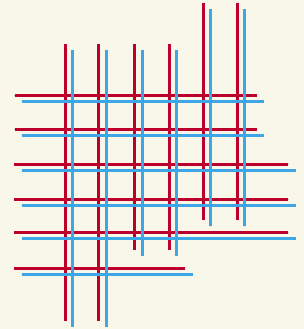
Art. No.	Product
308.100M20	Dipping bottle EX M20
308.200M22	Immersion cylinder M22
308.500M20C	Dipping bottle with stop cock
318.000	Sediment sampler
308.800	Lowering device Schnapper V2A
308.400M21	Dipping bottle M21
308.700	Hand reel, metal with 30 m steel cable

Viscous sampler

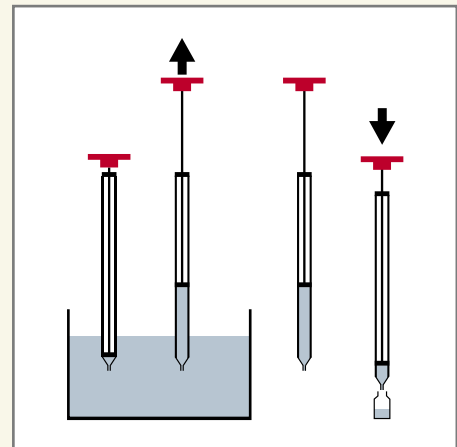
Samplers for target and average samplers in viscous media

These samplers are ideal for sampling viscous media using a vacuum.

Designed for target and average sampling.



Operation



Further information about operation at www.gmp-sampling.com

For target sampling:

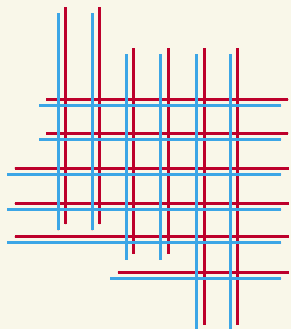
The sampler is lowered to the desired depth and the sample is sucked in by pulling the lever.

For average sampling :

In the same measure the sampler is lowered into the media the lever is pulled. A representative sample is sucked into the sampler.

Applications

Viscous samplers are suitable according to their chemical resistance for all kinds of viscous media that do not have a sufficient flow behavior e.g. resins, paints, greases, cremes, jellies, mud etc. The containers must have an opening of at least 35 mm, for entering the sampler. The Mini Visco sampler requires an opening of min 15mm.



Viscous sampler of PP and PTFE



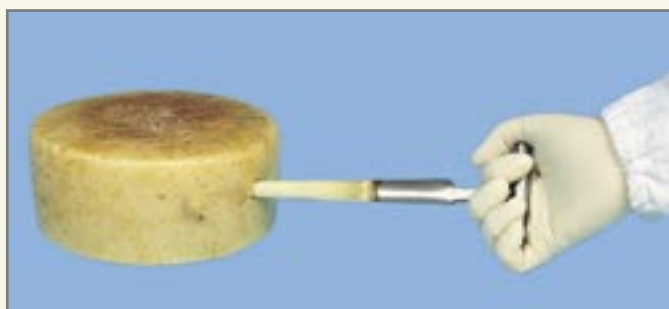
Art. No.	Product	Length [cm]	Volume [ml]
311.100p	Viscous sampler PP	Length 100 cm	ca. 300
311.100t	Viscous sampler PTFE	Length 100 cm	ca. 300
311.100ss	Viscous sampler 316 stainless steel	Length 100 cm	ca. 300



Mini Viscous sampler, stainless steel

Ideal for small samples of viscous media e.g. in the pharmaceutical industries.
 Diameter 15 mm. Available with different suction tips to suit different viscosities
 Depending on viscosity a 2 or 4 mm suction tip is required (option).

Art. No.	Product	Volume [ml]
310.100	Mini viscous sampler, Length 60 cm	ca. 30
310.102	Suction tip 2 mm	
310.104	Suction tip 4 mm	



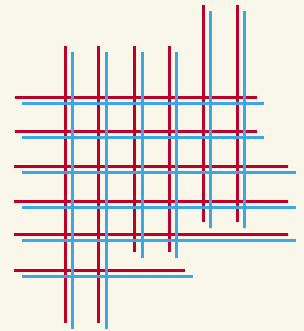
Core sampler stainless steel 316

conical, hand operated borer acc. to EN/ISO 304.
 Ideal for small samples of semi-solid products such as cheese, wax, greases, clay.
 Operation depth 130 mm,
 Total length ca. 175 mm,
 Made of stainless steel 316.

Art. No.	Product	Length [mm]
305.070	Core sampler stainless steel 316	175

Bulk sampling

Bulk material



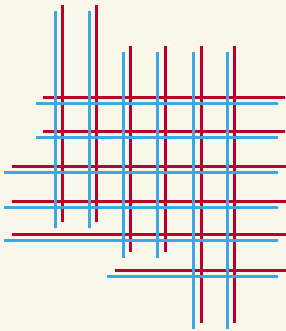
As bulk material in motion has a special flow behaviour representative sampling of this kind of material is very difficult. This is valid especially for bulk that has been transported by train or lorry. The products tend to de-mix respectively the heavy parts do fall down and generate a sediment.

Hence judging the whole is a difficult task. Single samples from the surface are not sufficient as they are not representative for the whole quantity.

We recommend to set-up and validate a sampling schedule that specifies the number and locations of the samples. The direction of the transport should be respected in this sampling schedule. Out of the numerous single samples a representative collected sample should be made.

Our devices are designed specially for this task: To collect quickly a high number of samples with the same size, without changing the composition or features of the samples.

Bulk sampling (e.g. seeds, granulates etc.)



Sampler **Bulky**

Sampling without damage of particles

Operation:

The sampler is manually pushed into the bulk material in a closed position. When the target depth is reached the sampler chamber is opened by the operator allowing the sample to enter the chamber. The collected sample can then be discharged into a container following removal from the bulk material.

Made from stainless steel AISI 304, grip covered with rubber.

Recommended for particle sizes 0-20mm.

Total length: ca. 1200 mm

Different capacities

An optional closing system allows to close the chamber at the target point.

World novelty!



Sampler **Anger**

This sampler Anger was specially designed for seed testing. The advantage is that is nearly impossible to damage the seeds.

Operation:

Entering the bulk material the sleeve on the sampler chamber is closed. The sampler is inverted to allow the discharge of the sample into an appropriate container.

Many single samples can be withdrawn in a short period of time.

Completely made from stainless steel AISI 304, grip covered with rubber.

Recommended for particle sizes 0-10mm.

Total length: ca. 1200 mm

Different capacities available

World novelty!



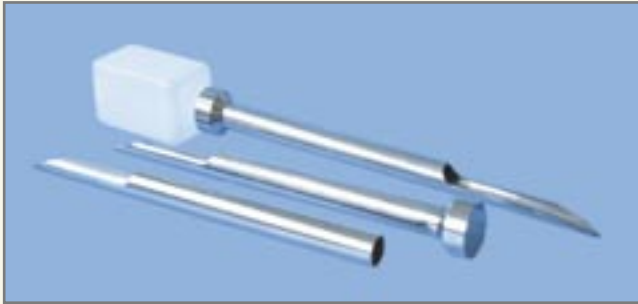
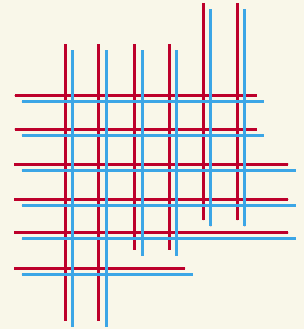
Art. No.	Product	Sample volume [ml]
307.500	Sampler Bulky 50	50
307.100	Sampler Bulky 100	100
307.150	Sampler Bulky 150	150
307.230	Sampler Anger 30	30
307.260	Sampler Anger 60	60
307.290	Sampler Anger 90	90
301.010	Closing device for Bulky	



Further information about operation at www.gmp-sampling.com

Lances

Lances for bulk material in sacks, big bags etc.



Universal lance

Simple sampler for flowing bulk such as coffee, nuts, pellets with a particle size up to 10mm. The sample is withdrawn either directly into a plastic bag or another suitable container. Made of stainless steel AISI 316, polished surfaces, length 400 mm, diameter 25 mm



①



②



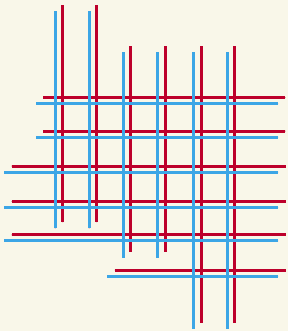
③



Art. No.	Product
① 306.101	Lance, plain
② 306.102	Lance, with end cap
③ 306.103	Lance with adapter + 1 bottle 250 ml
306.104	Bottle 250 ml

Lances

Lances for bulk in sacks, big bags etc.



Bulk lance 40

Simple sampler for coarse grained bulk with a particle size up to 20 mm.
 Made of stainless steel AISI 304, with soft grip
 Length 400 mm
 Diameter 45 mm



Lance conical

Conical construction, for bulk with a particle size up to 3mm
 The sample is withdrawn directly into a plastic bag.
 Made of brass
 Length 320 mm
 Diameter 12-20 mm



Lance for milk powder

According to EN/ISO 707
 Completely made of stainless steel
 AISI 316
 Length 400 mm, Diameter 30 mm



Art. No.	Product	Sample volume [ml]
305.040	Bulk lance 40	various
305.050	Lance conical	various
305.060	Lanze for milk powder	ca. 160



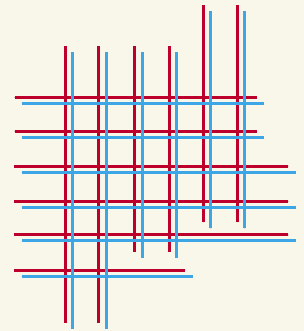
Sacks and big bags can be closed with **Close'n'Seal** (see page 32).

Slot sampler

For target-, multilayer-, and average sampling

acc. to DIN 53242

These samplers allow simultaneous sampling of different depths from the bulk material. Pocket or zone samplers may be used either vertically or horizontally.



(A) Target sampling:

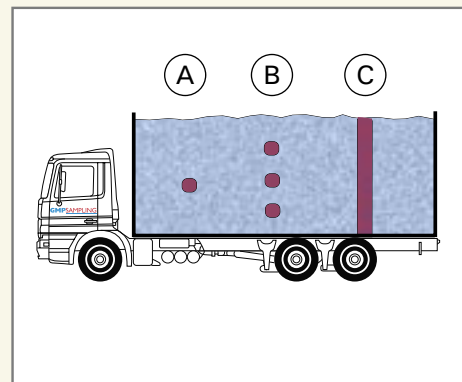
The sample is withdrawn from a specific depth in the bulk and can accurately be assigned to this depth.

(B) Multilayer sampling:

Diverse target samples are withdrawn simultaneously from different depths in the bulk. Each of the samples can accurately be assigned to its specific depth.

(C) Average sampling:

A single sample is withdrawn from the whole depth. This results in a sample that represents an average at the specific spot.



Applications

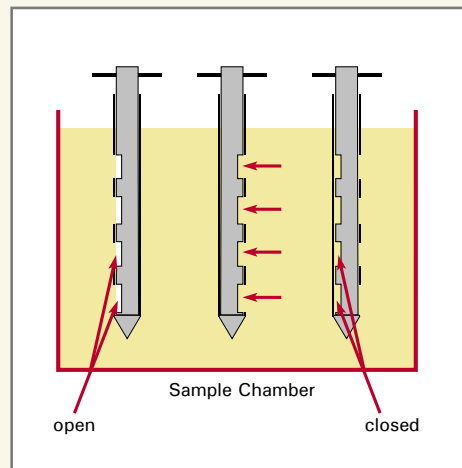
Generally zone samplers are suitable for all kinds of bulk, that are within the specification regarding particle size and flow behaviour. They can be used as well horizontally and vertically in a wide range of containers. Please refer to the description for details.

The nature, particle size, bulk density of the product and material analysis method must be clearly identified before equipment selection can be decided.

Operation

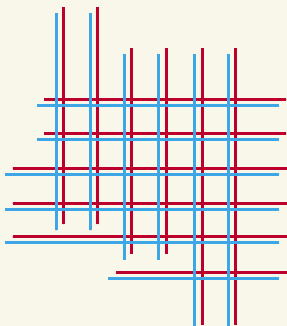
Two turnable tubes can be twisted to open and close the collecting chambers.

The zone sampler is inserted in closed condition into the bulk. By turning the inner tube the chambers are opened and the sample is collected. For bulk that is not free-flowing (cohesive) we recommend the zone sampler with scraping edge.



Further information about operation at www.gmp-sampling.com

Slot sampler for average samples



Made of polished high grade stainless steel AISI 316, different lengths, diameter 25 mm.

Approved sampler for the withdraw of Average samples from all kinds of bulk and powders with a maximum particle size of 6 mm. Emptying through the end.

3, 4 or 5 Zones depending on length.

Art. No.	Product	Zones/-Volume [ml]
304.055	Slot sampler for average samples 55, stainless steel L= 600 mm	3 / 110
304.100	Slot sampler for average samples 100 stainless steel L= 1000 mm	4 / 190
304.150	Slot sampler for average samples 150 stainless steel L= 1500 mm	5 / 300

Slot sampler „Multi-layer“



Very popular device, that is collecting single samples from different depths. The single samples can be analysed separately.

Inner part either made from inert PTFE (Teflon) or stainless steel AISI 316.

Suitable for bulk with a maximum particle size of 6 mm.

Available lengths: 550, 850 and 1500 mm. Diameter 25 mm.

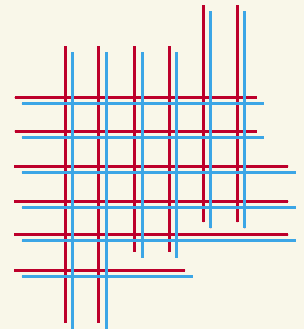
Emptying rack

For emptying Multi-Layer zone samplers with 3 or 5 zones. Avoids mixing the different zone samples accidentally.



Art. No.	Product	Zones/-Volume [ml]
303.055	Slot sampler „Multilayer“, stainless steel L = 550 mm	3 / 15
303.085	Slot sampler „Multilayer“, stainless steel L= 850 mm	3 / 17
303.150	Slot sampler „Multilayer“, stainless steel L= 1500 mm	5 / 17
302.055	Slot sampler „Multilayer“, stainless steel / with teflon core L= 550 mm	3 / 15
302.085	Slot sampler „Multilayer“, stainless steel / with teflon core L= 850 mm	3 / 17
302.150	Slot sampler „Multilayer“, stainless steel / with teflon core L= 1500 mm	5 / 17
accessories:		
288.25-60	Cleanning brush Ø 25 mm Length 600 mm (stainless steel)	
289.055	Emptying rack for 550 mm Slot sampler 3 zones	
289.085	Emptying rack for 850 mm Slot sampler 3 zones	
289.150	Emptying rack for 1500 mm Slot sampler 5 zones	

Alu slot sampler for average samples



Slot sampler Maximus for average sampling ALU

For coarse grained bulk with a maximum particle size up to 12mm.
Emptying through the end.

Made from aluminum, different lengths, diameter 50 mm, high sample size.



Art. No.	Product	Zones/-Volume [ml]
301.085	Slot sampler MAXIMUS for average samples ALU 850 mm	3 / 800
301.150	Slot sampler MAXIMUS for average samples ALU 1500 mm	5 / 1700

Slot sampler ECO for average sampling ALU

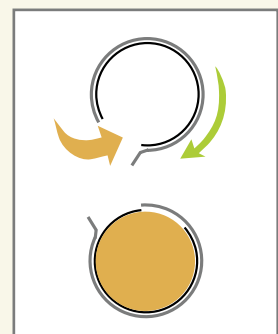
Economic device made of aluminium for average sampling. Emptying through the end.
Maximum particle size: 6 mm



Art. No.	Product	Zones/-Volume [ml]
300.150	Slot sampler ECO for average samples 150 aus ALU L= 1500 mm	5 / 280
300.085	Slot sampler ECO for average samples 85 aus ALU L= 850 mm	3 / 130

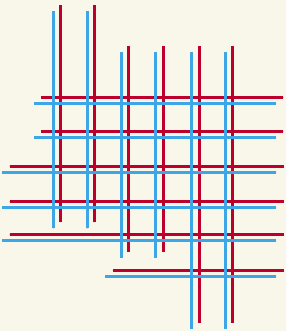
Zone sampler with scraping edge stainless steel

Diameter 25 mm,
length 1000 mm.



Art. No.	Product	Zones/-Volume [ml]
290.100	Zone sampler with scraping edge stainless steel	4 / 200
Accessories:		
288.25-60	Cleaning brush Ø 25 mm Length 600 mm (stainless steel)	
288.25-60	Cleaning brush Ø 50 mm Length 600 mm (stainless steel)	

Sampling probe stainless steel AISI

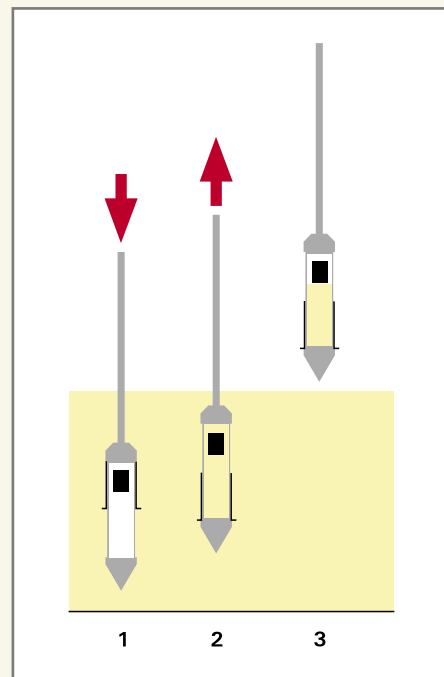


Universal and precise sampler for target sampling. Suitable for free flowing bulk or powders with a maximum particle size of 8mm. Can be used both vertically and horizontally.

Operation

- (1) The chamber has a port that will be closed automatically by a sleeve when entering the product.
- (2) When pulling back the port will be re-opened allowing the sample to fall into the collection chamber
- (3) The sample can be removed by unscrewing the chamber or through the port.

Stainless steel AISI 316, polished surfaces.
Three sizes available
Can be used for depths up to 2,50 meters.



Further informations about operation at www.gmp-sampling.com

Art. No.	Product
277.100	Pharmaceutical sampling probe 100 ml
277.150	Pharmaceutical sampling probe 150 ml
277.200	Pharmaceutical sampling probe 200 ml
277.010	Handle 1000 mm
277.015	Handle 1500 mm
277.001	Extension to handle 1000 mm



Sacks and big bags can be closed with **Close'n'Seal**
(see page 32)

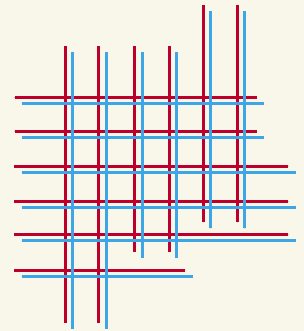
UDS-Sampler

for pharmaceutical applications

Unit dose sampling (UDS) is a method commonly applied in pharmaceutical production. The target is to proof the „Content Uniformity“ of mixtures. Content Uniformity means the homogenous distribution of the components within a mixture. The examination method that is also called Blend Uniformity Analysis (BUA) is described in the FDA or GMP guidelines. Since this procedure has to proof the content uniformity for the smallest applicable dose the quantity of the withdrawn sample must not exceed 1-3 times of this quantity.

Taking of such small and at the same time representative samples is enormously difficult, since the introduction and moving instruments can already lead to separation. The different portions of a mixture can have different detention and flow characteristics and this can lead to the fact that the sample is no longer representative.

It is therefore important to accomplish this particularly delicate sampling procedure correctly and to know the extent of the separation. In any case it is to be validated for the respective application or the respective product. The construction and function mode of the following UDS samplers are optimized to minimize the measurable separation effect.



Applications

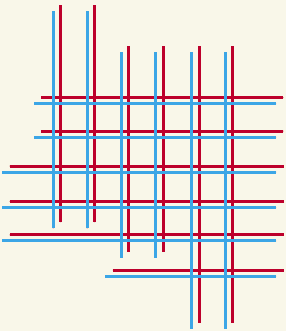
Pharmaceutical production where small samples are required.



Pharma-Picker

The set includes all accessories in a superior sampler case -lockable.

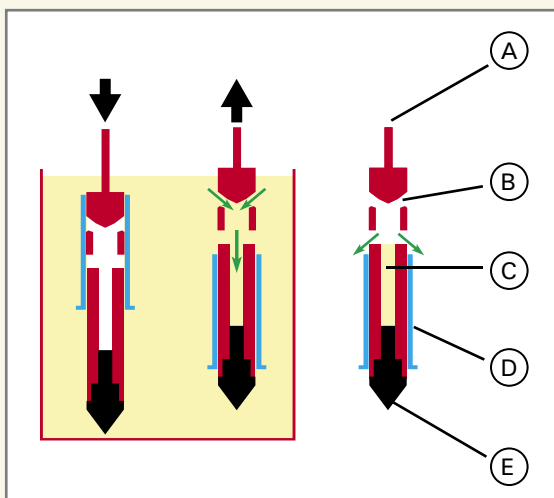
Pharma-Picker Set



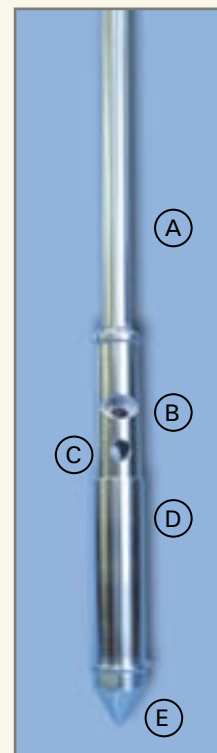
Internationally approved standard equipment for the pharmaceutical industry according to the GMP guidelines. Used for Unit dose sampling (UDS). Sample quantities from 0,1 bis 2,5 ml.

1. When inserted into the product the sample chamber will close automatically.
2. At the target spot pull up the sampler slightly. This will force the sleeve down and expose the ports. The sample will fall into the sample chamber.
3. After the sampler is removed from the product an accurate volume will remain in the sample chamber.

Operation



- A Rod
- B Ports
- C Sample chamber
- D Sleeve
- E Tip



Further information about operation at www.gmp-sampling.com

Different volume sampling tips define the volume from 0,1 to 2,5 ml and can be fitted to the same chamber.



Art. No.	Product
284.000	Pharma Picker Set in lockable case, with handle, 4 rods 600 mm, sample chamber 1 (0,1 – 1,2 ml) sample chamber 2 (1,3 – 2,5 ml) 10 tips (free choice - please advise desired the capacity)

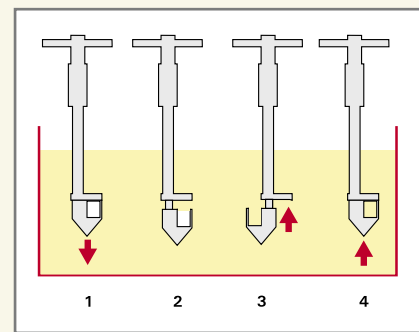
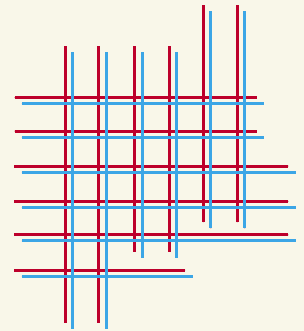
Unit Dose Cohesive Sampler

A popular sampler in the pharmaceutical industry for taking a small volume (UDS) cohesive powder sample. This sampling technique is to reduce the effect of separation.

The sample chamber can be exchanged, hence different volumes can be sampled.

0,25 ml / 0,50 ml / 0,75 ml / 1,00 ml

Stainless steel AISI 316L, polished finish. The Set includes all 4 sizes and a robust sampler case, lockable.



Further informations about operation at www.gmp-sampling.com

Art. No.	Product
283.000	UDS-Cohesive Sampler Set: 4 Sample chambers (0,25/0,5/0,75/1,0 ml) Rod Lockable case
283.010	Cohesive Sampler without sample chamber
283.025	Sample chamber 0,25 ml
283.050	Sample chamber 0,50 ml
283.075	Sample chamber 0,75 ml
283.100	Sample chamber 1,00 ml

Mini-Pot stainless steel AISI 316L

Multi purpose small volume containers with crevice free interior leak proof -without seal

Diameter 50 mm

3 sizes available



Art. No.	Product	Capacity [ml]	Size [mm]
282.020	Mini-Pot	20	Ø 50 x 25
282.050	Mini-Pot	50	Ø 50 x 45
282.100	Mini-Pot	100	Ø 50 x 71

GMP compliant tools and accessories in stainless steel (AISI 316L)

Pharma-Scoops

see page 31



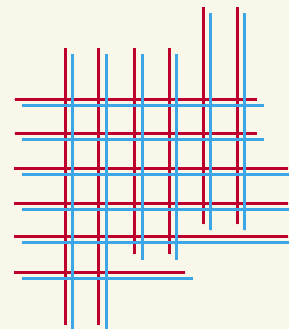
Mini-Pot

see pages 26 /40



UDS sampler for pharma applications

Powder probe stainless steel AISI 316L

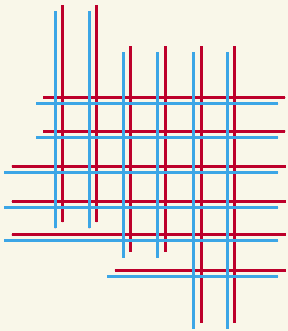


This approved sampling system collects quick and easily samples from powders and powder mixtures. The samples are equal in quantity. It is possible to withdraw target point samples from different spots of a container. These samples can be reviewed as single samples or may be processed to obtain a composite sample. The inter-changeable volumetric tips have capacities between 0,25 and 50ml.

Please note the colour coding to find the corresponding probe and tip.



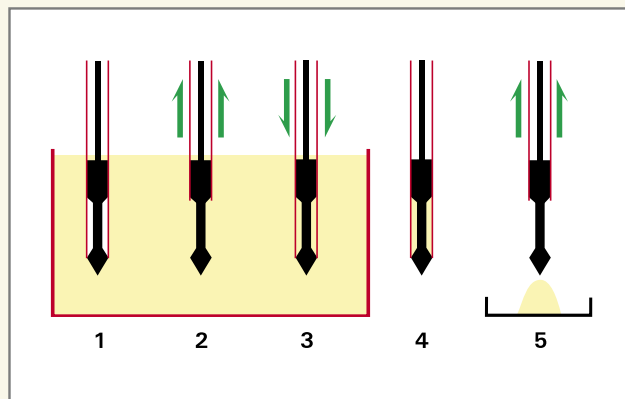
Powder probe stainless steel AISI 316L



Operation

The sampling system consists of a tube and a immersable tip that closes the tube. After diving the tube into the powder the tip can be deployed by activating the handle. The powder is entering the tip and will be collected into the tube by returning to the initial position.

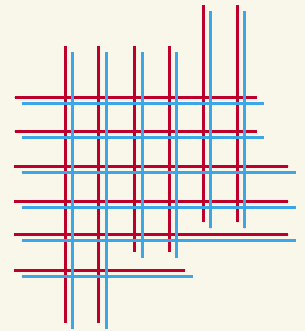
The system can completely be disassembled for cleaning purposes.



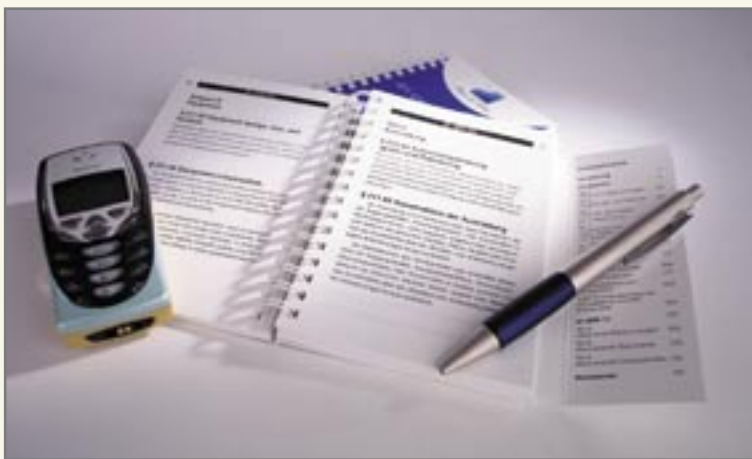
Further information about operation at www.gmp-sampling.com

Art. No.	Product	Ø [mm]	Length
281.1260	Sampler body 12,5/60	Ø 12,5	60
281.12100	Sampler body 12,5/100	Ø 12,5	100
281.12150	Sampler body 12,5/150	Ø 12,5	150
281.1960	Sampler body 19/60	Ø 19,0	60
281.19100	Sampler body 19/100	Ø 19,0	100
281.19150	Sampler body 19/150	Ø 19,0	150
281.3260	Sampler body 32/60	Ø 32,0	60
281.32100	Sampler body 32/100	Ø 32,0	100
281.32150	Sampler body 32/150	Ø 32,0	150
Immersable tips			Sample volume [ml]
280.12025	Immersable tip 12,5/0,25	Ø 12,5	0,25
280.12050	Immersable tip 12,5/0,5	Ø 12,5	0,50
280.12075	Immersable tip 12,5/0,75	Ø 12,5	0,75
280.12100	Immersable tip 12,5/1,0	Ø 12,5	1,00
280.1920	Immersable tip 19/2,0	Ø 19,0	2,00
280.1930	Immersable tip 19/3,0	Ø 19,0	3,00
280.1950	Immersable tip 19/5,0	Ø 19,0	5,00
280.1980	Immersable tip 19/8,0	Ø 19,0	8,00
280.1910	Immersable tip 19/10,0	Ø 19,0	10,00
280.3220	Immersable tip 32/20,0	Ø 32,0	20,00
280.3225	Immersable tip 32/25,0	Ø 32,0	25,00
280.3250	Immersable tip 32/50,0	Ø 32,0	50,00

GMP Consultant



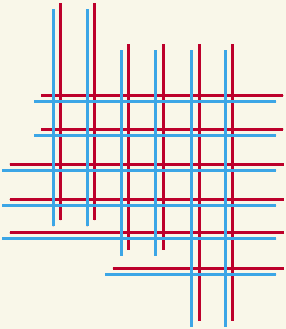
GMP Consultant
ICH Q7A GMP FOR ACTIVE
PHARMACEUTICAL INGREDIENTS



Art. No.	Product	
268.060	ICH Q7A GMP FOR ACTIVE PHARMACEUTICAL INGREDIENTS	120 pages

Scoops

e.g. for pharma applications



Pharma Scoop AISI 316L

GMP compliant scoops.
 Heavy duty construction.
 Crevice free.
 Satin finish.
 Radiused corners for easy cleaning.
 8 sizes available



Art. No.	Product	Ø mm	Length [mm]
279.0010	Pharma Scoop 10 ml	25	75
279.0050	Pharma Scoop 50 ml	38	110
279.0100	Pharma Scoop 100 ml	50	180
279.0750	Pharma Scoop 750 ml	95	330
279.1100	Pharma Scoop 1000 ml	110	340
279.1200	Pharma Scoop 1200 ml	125	305
279.1700	Pharma Scoop 1700 ml	135	355
279.2500	Pharma Scoop 2500 ml	185	320



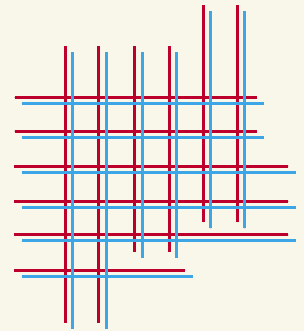
Square Pharma Scoop AISI 316L

GMP compliant flat scoop
 Heavy duty construction
 Crevice free
 Satin finish

Art. No.	Product	Size [mm]
278.1500	Square Pharma Scoop 1500 ml	160 x 190 x 45

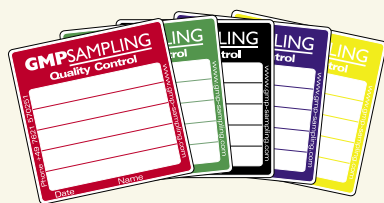
Close'n'Seal

For marking closure sealing and labeling



Because of the good adhesive force these seals hold nearly everywhere, even on dirty, moisten or uneven surfaces. The vapor barrier from aluminum prevents reliably the penetration of humidity.

- Ultra strong caoutchouc-based adhesive
- 6 colours available
- two different sizes (95x95mm and 150x150mm)



available in 6 colours



Size 95 x 95 mm

Art. No.	Product	Farbe	Rolle	Format [mm]
287.010	Close'n'Seal	red	à 500 pieces	95 x 95
287.011	Close'n'Seal	green		95 x 95
287.012	Close'n'Seal	yellow		95 x 95
287.013	Close'n'Seal	blue		95 x 95
287.014	Close'n'Seal	black		95 x 95
287.015	Close'n'Seal	white		95 x 95
287.110	Close'n'Seal	red	à 250 pieces	150 x 150
287.111	Close'n'Seal	green		150 x 150
287.112	Close'n'Seal	yellow		150 x 150
287.113	Close'n'Seal	blue		150 x 150
287.114	Close'n'Seal	black		150 x 150
287.115	Close'n'Seal	white		150 x 150

Close'n'Seal



Very strong caoutchouc based adhesive

Holds even on dirty, moisten or uneven surfaces

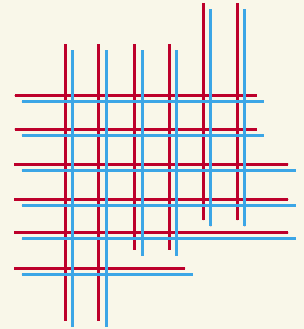
With vapor barrier from aluminium

Avoids rippling from damaged packages and loss of product

Accessories

Sample splitter

Sample splitters are used for dividing bulk material into representative test samples. The divider consists of a number of alternatively arranged partitions, with the material collected in alternate receivers. Portable, easy operation and cleaning.



Dividing process according to DIN 51701, Part 4

Sample Splitter RT 12.5

Rack made from lacquered sheet steel, one stainless steel divider, three receivers made from tinned sheet steel. The divider has

18 divisions, 12,5 mm = 1/2"

For bulk with a maximum particle size of about 6 mm.

Sample Splitter RT 25

Rack, one divider and three receivers made from galvanized steel.

The divider is available has

16 divisions, 25 mm = 1"

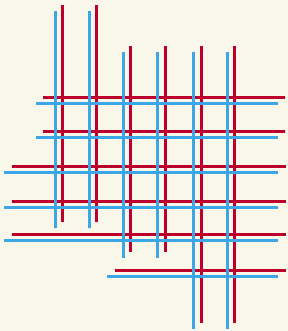
For bulk with a maximum particle size of about 12 mm.



Art. No.	Product
276.125	Sample splitter RT 12,5
276.250	Sample splitter RT 25

Accessories

Electronic Balances



For weighing samples and bags directly on-site

Model MH

Standardly equipped with three useful modes: Weighing - Temperature - Time

Hold-Button: The display will freeze for about 7 seconds, hence simple reading.

Space saving, maintenance-free ideal for carrying.

Model HCB

Stable Hanging Scale for small loads.

By the snap link in stainless steel, with security lid the balance offers various applications.

Ready for use, as the 3 x 1,5V-batteries are inclusive. The balance has an AUTO-OFF function after 3 min to preserve the battery.

Total balance WxDxH 80 x 45 x 150mm.

The hight between the carbine and the hook is 290 mm.

LCD-Display digit-height 12 mm

Ready for use, as the 3 x 1,5V-batteries are inclusive.

Auto power off after 3 min to preserve the battery.

H 80 x 45 x 150mm.

The hight between the carbine and the hook is 290 mm.

LCD-Display digit-height 12 mm

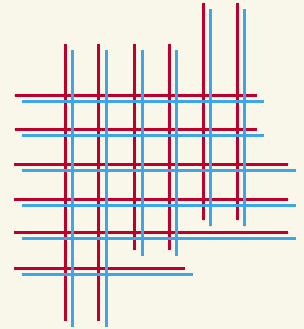


Art. No.	Product	Range / T
275.5k5	Elektronic balance MH 5k5	Max 5 kg T= 5 g
275.10k10	Elektronic balance MH 10k10	Max 10 kg T= 10 g
275.100k200	Elektronic balance HCB 100k200	Max 100 kg T= 200 g

Accessories

Aluminium scoops

Professional quality
sterilizable, economic
6 sizes available



Art. No.	Product	Capacity[ml]	Size[mm]
274.0140	Aluminium scoop	140	200 x 60
274.0335	Aluminium scoop	335	240 x 80
274.0750	Aluminium scoop	750	290 x 100
274.1100	Aluminium scoop	1500	330 x 120
274.1500	Aluminium scoop	1500	380 x 140
274.2500	Aluminium scoop	2500	420 x 160

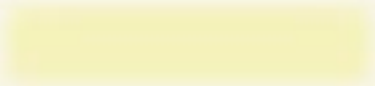
Sample bassins

Heavy-duty industrial quality. For collection and mixture of samples

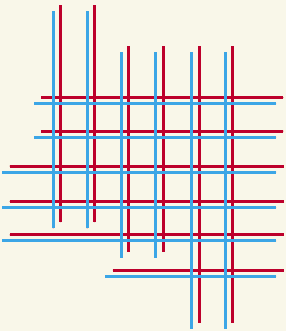
- Stainless steel AISI 304
- Different sizes available



Art. No.	Product	Capacity [l]	Capacity [l]	H x Ø [cm]
273.060	Sample bassin 6 l	6	6	12,0 x 31,5
273.080	Sample bassin 8 l	8	8	13,0 x 32,5
273.120	Sample bassin 11 l	11	11	13,5 x 38,0
273.150	Sample bassin 14 l	14	14	16,0 x 40,0

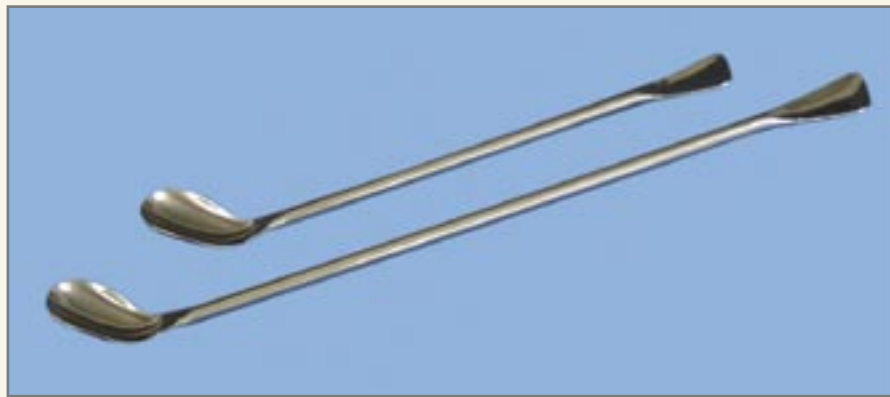


Cutlery



Poly spoon

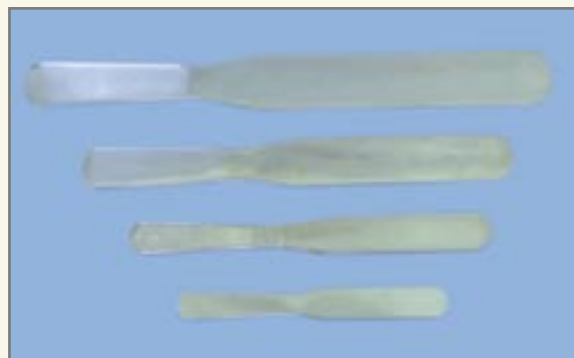
Stainless steel universal spoon
 Handle 8mm diameter
 Spoon size 28 x 60 mm



Art. No.	Product	Length [mm]
286.300	Poly spoon	300 mm
286.400	Poly spoon	400 mm

Pallet knives

- crevice free construction
- very good spring properties
- different sizes available

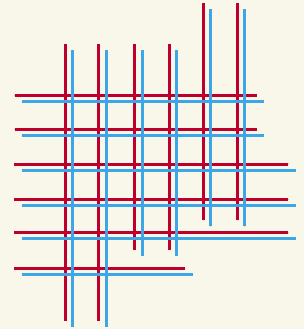


Art. No.	Product	Size [mm]
285.100	Pallet knife 100	100 x 20
285.150	Pallet knife 150	150 x 25
285.200	Pallet knife 200	200 x 32
285.250	Pallet knife 250	250 x 38
285.300	Pallet knife 300	300 x 45

Disposables

Single-use V-Spatula, sterile

made from white polystyrene
individually wrapped
100 pieces per case



Art. No.	Product	Length [mm]
272.000	Single-use V-Spatula, 100 pieces	120

Single-use spoons, sterile

made from white polystyrene
individually wrapped.

100 pieces per case

Two sizes: 120 mm und 150 mm



Art. No.	Product	Blade length [mm]
271.150	Single-use spoons 150 mm (Pack à 100)	150
271.120	Single-use spoons 120 mm (Pack à 100)	120

Thumb tubes

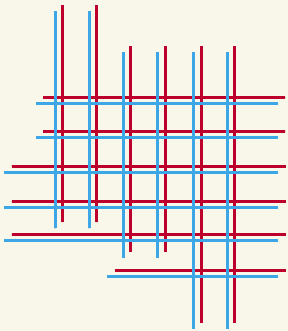
Transparent polyethylene
Simple to use, economic
For sampling liquids in drums, barrels tanks, etc.



Art. No.	Product	Inhalt [ml]
309.100	Thumb tube PE 100 cm	275
309.075	Thumb tube PE 75 cm	175
309.100	Disposable dipper HDPE	100
309.075	Disposable dipper HDPE	75
313.0100P	Disposable dipper HDPE, non-sterile, 50 pieces	diameter 12 mm 100
313.0100PS	Disposable dipper HDPE, sterile. 50 pieces	diameter 12 mm 100
313.0100G	Disposable dipper Glass, non-sterile, 50 pieces	diameter 12 mm 100
313.0100GC	Disposable dipper Glass, precleaned, 50 pieces	diameter 12 mm 100

Disposables

ScoopPot, sterile



Scoop made from white polystyrene

Vial made from clear styrene

leak proof

individually wrapped

25 ScoopPot per case

Capacity ca. 170 ml

Robust construction, ideal for semi-solid products



Art. No.	Product	blade length [mm]
270.000	ScoopPot (Pack of 25)	120

Single-use scoops, sterile

with snap-over cover that seals product inside

100 pieces per case

individually wrapped.

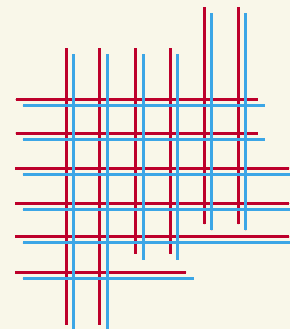


Art. No.	Product	Length [mm]
269.125	Single-use scoops 125 ml (Pack à 100)	190
269.060	Single-use scoops 60 ml (Pack à 100)	178

Packaging

Steribags

Sterile bags made from transparente high-density polyethylene.
 leak-proof closure by twirling the bag.
 500 bags per case



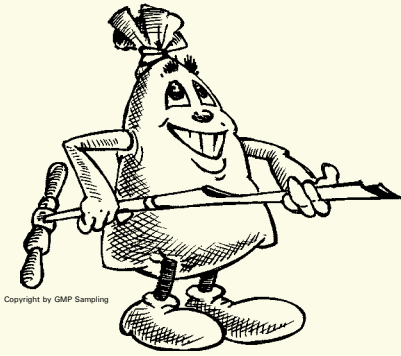
Art. No.	Product	Capacity[ml]	Pieces per case
266.180	Steribag	180	500
266.540	Steribag	540	500
266.720	Steribag	720	500

Mini-Pot Pots stainless steel AISI 316L

Multi purpose small volume containers
 crevice free interior leak proof -without seal
 Diameter 50 mm
 3 sizes available

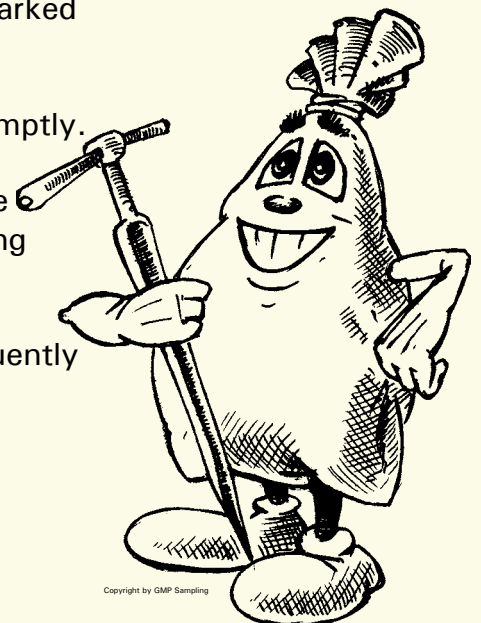


Art. No.	Product	Capacity[ml]	Size [mm]
282.020	Mini-Pot	20	ø 50 x 25
282.050	Mini-Pot	50	ø 50 x 45
282.100	Mini-Pot	100	ø 50 x 71



Hints for professional sampling

- ▲ The evaluation and/or the analysis of the product begins already with the sampling. Sampling is thus an analytical procedure.
- ▲ The goal of sampling: Obtaining information about the characteristics of a product. This happens by examining a partial quantity.
- ▲ Hence sampling has to be representative and reproducible
- ▲ Documentation: Each sampling should be recorded, as well as each deviation from existing operation procedures and regulations
- ▲ No alterations on samples.
- ▲ Security: Only the analysis shows, which product it concerns. Therefore always wear protective clothing and take reasonable precautions.
- ▲ The sampling should take place only at a clean place protected from external influences.
- ▲ Samples should immediately be packed in suitable containers and closed securely. Each sample has to be marked with the necessary data.
- ▲ Samples are to be transferred to the laboratory promptly.
- ▲ Sampling equipment must be cleaned in accordance with plant operating procedures immediately following sampling operations.
- ▲ Personnel doing the sampling should be trained frequently and referred to these principles.



Glossary

Average sample	Sample that represents an (local) average of a product. Has not to be homogenous if the main quantity is not homogenous.
Collected sample	→ Mixed sample
Contamination	Pollution e.g. with dust, bacteria, pulp, wood chips, hair, bugs or other. When sampling special care has to be taken that neither the samples nor the main quantity is contaminated.
Cross contamination	Pollution with a different product. Can easily happen when sampling different products one after the other and no or insufficient cleaning of the sampler, thru clothing of personal.
Documentation	Both the general procedure of sampling and each execution of sampling has to be documented adequately.
GMP	<p>(= Good Manufacturing Practice) GMP is a term that has been introduced by the US authority Food and Drug Administration (FDA) in 1962. It's synonymous for a compilation of measures and instructions that have to be respected when producing specific products (e.g. pharmaceutical, foodstuff, cosmetics). Its' target is to manufacture these products reliable and reproducible in the desired quality.</p> <p>The commitment to respect the GMP guidelines arises from the respecting laws or from international agreement (e.g. PIC = Pharmaceutical Inspection Convention)</p>
Heterogeneity	<p>In-Homogeneity: dissimilarity within a product caused by diverse influences. Causes are often contamination, changes of temperature, vibrations, insufficient mixing, rotation and sedimentation.</p> <p>Detection of In-Homogeneity: On the basis of a defined sampling schedule take many small samples from the product, analyze separately, assign average \bar{M} of the results and its' relative uncertainty u_{rel}.</p> <p>If u_{rel} is higher than the combined relative uncertainty of measurement of the single analysis a significant in-homogeneity exists.</p> <p>Possible routine measures:</p> <ul style="list-style-type: none"> - include u_{rel} as an additional component in the uncertainty of measurement. - Prescribe the same procedure for each analytical sample according to the sampling schedule. All single analyses are carried out and the In-Homogeneity is included in the report (all differing single results are shown) - Sampling as above then creation of a → mixed sample, which is analyzed.
Homogeneity	Uniformity of a product regarding one or several features but not necessarily all features. Also see: → Heterogeneity.
Hygiene	Rules that have to be respected as soon as work on the opened product has commenced e.g. during sampling. Garment instructions (overalls, caps, masks, gloves etc.) are related to hygiene as well as personal behaviour next to the open product such as not to eat, smoke, sneeze or cough, scrape or bend over the product.
Labeling	Both the samples and the sampled containers have to be labeled in order to ensure retraceability. The labeling must be readable, unique and durable (no Post-it).
Location of sampling	Ideally a special room or cabin should be available for the sampling. The sample should be withdrawn in a clean surrounding where the risk of environmental influences on the sample is minimized. If sampling is done frequently it should be executed always in the same place
Mixed sample	A mixed sample can be created by collecting and mixing multiple single samples. See also → Collected Sample
Qualification	Certified approval of suitability of devices, facilities, equipment, and also personnel and suppliers. Qualification is a supposition for validation.

Glossary

Random Sample	A partial quantity that is representative to the main quantity regarding the composition, characteristics and features to be examined. The correct sampling is an essential part of the quality control system. The number of the samples to be withdrawn should be result of statistical thoughts and be defined in the → sampling schedule.
Reproducibility	At what extend can the results be reproduced when the sampling and analysis is conducted on different days by different personal, different devices, different laboratories?
Retain sample	Samples that are not analyzed directly but serve as conservation of evidence (demand e.g. in pharmaceutical industry)
Sample dividing	Procedere to create representative analytical samples out of huge mixed or single samples. Analytical samples are often only a partage of the initially withdrawn samples.
Sample preparation	Methods to prepare the withdrawn samples for the regarding laboratory analysis. → Sample dividing can also be understood as part of the sample preparation.
Sampling Personel	Trained person who is able to withdraw the samples including the documentation according to the SOP. The personel has to be aware of the importance of their operations regarding GMP (representative samples) but also regarding safety.
Sampling schedule	Standard operation procederes (SOP's) constitute extent, location, apparatus, containers and labeling of sampling. If possible sampling schedules should be based on adequate statistical methods. Factors that in uence the results of the examination are considered sampling schedule. It's the descretion of the plant to define the extent of sampling depending on the risk and the quality targets. To do so random numbers can be used. It's more evident to check 2 samples from one line every day than to check 5 one time a week from a charge. Sampling schedules are generally specific to the product. Sampling schedule and SOP should be available on site.
Selfinspection	Auditing of the operations of a plant that produces and controlls pharmaceuticals is called selfinspection . Besides national regulations the guidelines of the FDA to supervise the production of pharmaceutical products and ingredients have to be respected. These inspection detect weakness in the quality control system and in the daily routine. The frequent and documented GMP selfinspections is regulated in diverse national and international laws.
Single sample	Sample, that will be withdrawn by a single action. A single sample can also be an average sample as it can be obtained e.g. with the Multi-Layer sampler
SOP	Standard Operation Procedure. Approved instruction that has to be respected by all colaborators. Any deviation from the SOP has to documented and justified.
Swab Test (swab sample)	Sample that is obtained by swabbing, e.g. to check the result after a cleaning process.
Target sample	Sample that is withdrawn from a specific location defined in the → sampling schedule.
UDS	Unit Dose Sampling - common sampling procedere in the pharmaceutical industry to ensure the blend uniformity. Only small samples are withdrawn that represent up to 3 times of the unit dose.
Validation	Validation in general is the generic term for all activities, that shall prove suitability of quality-relevant operations. In the narrow sense validation is the documented approval of the suitability of a method e.g. a method of analysis, a manufacturing method, a cleaning method for a specific purpose. There is no patent remedy for validation programs, validation always has to take place problem-oriented and pragmatically.
Validation of sampling	The validation has to produce evidence that the sampling is suitable to generate representative sample in terms of a specific question regarding the product.