laborette 27

Rotary Cone Sample Divider

- Representative sample division, accurate samples up to 99.9 %
- Safe for use with foodstuffs
- Variable division ratio

representative
sample division
dry and wet
for your lab

FRITSCH

Rotary Cone Sample Divider

Field of application

Representative division of dry solids and suspensions.

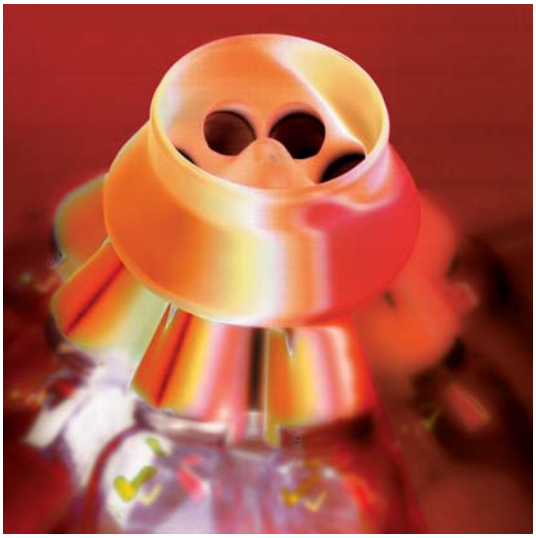
Sample division is one of the most important steps in the processing of solids or suspensions. Only in the rarest cases the analysis can be performed without previously having divided the sample first. This first step is always to reduce the initial bulk sample to a smaller quantity whilst retaining all its physical and chemical properties. Only then a meaningful and reliable analysis result can be obtained.

Rotary cone sample dividers form a symbiosis with extremely accurate analytical instrumentation. They are used in research, development and quality control laboratories to provide small but representative sample quantities for accurate analysis!

Because the Rotary cone sample divider laborette 27 is available in different variants and division ratios, it can be adapted to any applications with a high degree of dividing accuracy. Also the division of liquid media or suspensions can be carried out without conversion. In particular in the division of suspensions with coarse-grained fractions, division with the rotary cone sample divider avoids the disturbing influence of segregation by sedimentation of coarse or heavier fractions.

sample division sample preparation

Rotary Cone Sample Divider



laborette 27 with laborette 24

dividing head 1:30

Method of operation

Traditional dividing methods such as "coning" or "quartering" and eccentric rotary sample division no longer meet the requirements of modern analytical techniques. Accurate sample division is now achieved by a combination of three principles of division within a single unit:

The sample is passed via a hopper onto a rotating dividing cone whose profile simulates the process of coning and quartering. The sample material passes over the surface of the rotating cone and is accelerated outwards by the centrifugal force of the entire system. From there it is fed into up to 30 separate channels. The individual samples are collected in glass sample bottles.

Because of the rotation and the number of channels of the dividing head, the number of divisions reaches up to 3000 dividing steps per minute, so the feed to each channel is made up of a very large number of separate samples - a distinguishing mark for good sample division. With its design, the laborette 27 rotary cone sample divider can divide materials with an accuracy of 99.9 %.

Rotary Cone Sample Divider

Advantages

- Quick fit clamping of the sample bottles 250 ml and 500 ml as standard feature
- Representative sample division guaranteed
- Processes dry free flowing samples or suspensions without additional modification
- Choice of division ratios
- Compact - small footprint - light and portable
- Different sized collecting vessels in glass from 15 ml to 500 ml
- Materials safe for use with foodstuffs
- Controlled sample feeding using the vibratory feeder laborette 24
- Safety tested (CE mark)
- 2 year guarantee

Design Characteristics

- A basic machine can be used with a choice of 6 dividing heads.
- Quick fit clamping device for sample bottles 250 ml and 500 ml; customer bottles can be adapted
- Up to 3000 dividing steps per minute
- Ease of cleaning through removable dividing heads
- Maintenance free drive motor with slipping clutch, rotational speed 100 rpm
- Recyclable, robust cast aluminium housing

sample
representative preparation
sample division

laborette 27 for division of suspensions

Accessories

Dividing Heads

- Dividing heads with division ratios 1:8, 1:10 and 1:30
- Dividing heads of anodized aluminium for materials and suspensions with abrasive properties
- dividing heads of POM plastic for non abrasive materials
- Dividing heads of PTFE coated aluminium for aggressive solids and suspensions which attack POM plastic or aluminium

Feeding

Use of the vibratory feeder laborette 24 with uniform controlled material feed once again ensures division accuracy. In this way materials which exhibit a poor flow behaviour, e.g. cement or limestone, can still be accurately divided.

The sample delivery funnel

A choice of funnels in polymethylene plastic are available in four different diameters 5, 10, 15 and 22 mm to suit the particle size of the sample being divided.

Features	**Rotary Cone Sample Divider**		
Division ratio	Division 1:8	Division 1:10	Division 1:30
Materials	POM plastic or aluminium	POM plastic or aluminium	POM plastic or PTFE coated aluminium
Number of possible sub-samples	8	10	3
Max. permissible particle size	10 mm	10 mm	2.5 mm
Max. feed volume	4000 ml	2500 ml	300 ml
Capacity of sample glass container	250, 500 ml*	250 ml*	15, 20, 30 ml
Dry/wet	dry/wet	dry/wet	dry/wet

* thread of glass container: GL 55

laborette 27

Technical data

electrical details	230 V/1~, 50-60 Hz, 90 watt 115 V/1~, 50-60 Hz, 90 watt
weight	net: 8 kg, gross: 11 kg
dimensions w x d x h	27 x 45 x 46 cm
packing details	carton: 64 x 40 x 52 cm

Ordering data

Order no.	Description
	Rotary Cone Sample Divider laborette 27 **without dividing head**
27.1420.00	for 230 V/1~, 50-60 Hz
27.1410.00	for 115 V/1~, 50-60 Hz
	Dividing heads including sample bottles and funnel
	Division ratio 1:8
27.1300.00	POM plastic, including 8 sample bottles with screw lid 500 ml and funnel 10 mm diameter
27.1150.00	aluminium, including 8 sample bottles with screw lid 500 ml and funnel 10 mm diameter
	Division ratio 1:10
27.5150.00	POM plastic, including 10 sample bottles with screw lid 250 ml and funnel 10 mm diameter
27.4150.00	aluminium, including 10 sample bottles with screw lid 250 ml and funnel 10 mm diameter
	Division ratio 1:30
27.6150.00	POM plastic, including 3 sample bottles with screw lid 15 ml and funnel 10 mm diameter as well as 1 funnel each of 5 mm diameter for dry- resp. wet division
27.2150.00	PTFE coated aluminium, including 3 sample bottles with screw lid 15 ml and funnel 10 mm diameter as well as 1 funnel each of 5 mm diameter for dry- resp. wet division
	Accessories/Spare parts
27.1500.17	protective device, polyacryl (not illustrated)
27.1450.00	sample bottle 250 ml
27.1460.00	sample bottle 500 ml
83.3100.00	sample bottle 15 ml
83.3110.00	sample bottle 20 ml
83.3120.00	sample bottle 30 ml
27.1290.16	funnel 5 mm diameter
27.1330.16	funnel 5 mm diameter (only for division of suspensions with dividing head, division ratio 1:30)
27.1200.16	funnel 10 mm diameter
27.1210.16	funnel 15 mm diameter
27.1220.16	funnel 22 mm diameter
	Accessories for automatic feeding **Vibratory Feeder laborette 24 with V-shaped channel and control unit**
24.0030.00	for 200-240 V/1~, 50-60 Hz
24.0040.00	for 100-120 V/1~, 50-60 Hz
24.9100.00	stand for vibratory feeder

I27e-05-04-5/P

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