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Measuring cylinder used in chemistry lab

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A Measuring Cylinders / graduated cylinder is a piece of laboratory apparatus used to measure the volume of a liquids, chemicals or solutions during the lab daily work. Graduated cylinders are also used to
determine displacement, which is a measurement of the change in a volume of water when additional materials are added to it, this means that the volume of solid objects and solutions can be determined using a graduated cylinder. measuring cylinder menzura Measuring cylinder menzura Measuring cylinders (graduated cylinders) are graduated glass cylinders with a
capacity from 2 mL to 2 L. They are used when reagent solutions for volume measuring are prepared when accuracy is not of great relevance. The larger the measuring error. 

Download high quality image Skip to main content Compare the most helpful customer reviews of the best rated products in our Lab
Cylinders store. These products are shortlisted based on the overall star rating and the number of customer reviews received by each products in Lab Cylinders Exact determination and measurement of volumes The closely calibrated scales of volumetric products allow very accurate
determination and measurement of volumes. The products e.g. by Duran are available in two accuracy classes. The two classes differ in the accuracy of measurement: class A is the highest accuracy of measurement of volumes. The products e.g. by Duran are available in two accuracy of class B is approximately half that of
 class A. Measuring and mixing cylinder are calibrated for IN, which means volumetric flasks and cylinders are calibrated to measure the amount of fluid contained. So e.g. the desired concentration can be precisely set. Tips for heating volumetric glassware To ensure a long life-time for your measuring and mixing cylinder and to avoid volume
changes, the products should not be heated above +180°C in drying cabinets or sterilisers. Do not heat volumetric glassware on a hot plate. The lab glassware should gradually be heated up and cooled down to avoid thermal stresses and thus any possible breakage of the glass. Brand - Graduated Cylinders and Mixing Cylinders Brand a manufacturer
of lab supply, whose complete product range is available at the analytics-shop.com, offers among other things graduated cylinders and mixing cylinders. These products are made from glass (boro silicate) as well as from synthetics (PP, PMP, SAN). Glass Cylinders The glass cylinders of Brand manufactured under the brand Blaubrand are made from
high purity boro 3.3 according to DIN EN ISO 4788. All these glass products are characterized by a spout and a hexagonal base. For every graduated cylinder or mixing cylinder or mixing
USP certificate or DAkkS calibration certificate. Detailed descriptions of the glass products are listed in the following. Thereby the cylinders Blaubrand with certificate (type 2), graduated cylinder Blaubrand Eterna (type 3) and mixing cylinder with pp stopper (type 4).
 Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm] Graduated cylinders Blaubrand 5 0,1 0,05 USP 115 250 2 1,0 USP 335 10 0,2 0,01 USP 140 500 5 2,5 USP 365 25 0,5 0,25 USP 170 1000 10 5 USP 465 50 1 0,5 USP 200 2000 20 10 USP 505 100 1 0,5
                       Graduated cylinders Blaubrand Eterna 5 0,1 - 115 250 2 - 335 10 0,2 - 140 500 5 - 365 25 0,5 - 170 1000 10 - 465 50 1 - 200 2000 20 - 505 100 1 - 260
                                                                                                                                                                                                                                                                       Volume[ml] Subdivision[ml] GrindingNS Height[mm] Volume[ml] Subdivision[ml] GrindingNS Height[mm] Mixing cylinders 10 0,2 10/19 160 250 2
29/32 350 25 0,5 14/23 190 500 5 34/35 395 50 1 19/26 220 1000 10 45/40 500 100 1 24/29 285 * only valid for products with certificate Synthetics PP and PMP. Manufaturing takes place according to DIN 12 681 and ISO 6706. Therby the
graduated cylinders are adjusted to "in". The max. thermal load is declared to 80 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused. Cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For the material PMP Brand declares that a thermal load up to 121 °C, which is needed for
autoclave, does not cause permanently exceeded error limits. As for PP cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For applications, which require more frequent autoclave, PMP graduated cylinders with raised graduation are advised. Graduated cylinders made from PP are available with a tall shape as well as with small shape. Furthermore, first is distinguished between normal and raised graduation. In comparison, PMP graduated cylinders are offered with a tall shape exclusively, whereby cylinders can be delivered with a batch
certificate. Detailed descriptions about synthetic graduation cylinders can be found in the following. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Wolume[ml] Subdivision[ml] Er
500 5 5 360 50 1 1,0 200 1000 10 10 440 100 1 1,0 250 2000 20 20 535 Graduated cylinders, PP, small shape with raised graduation 25 0,5 0,5 - 250 5 5,0 - 50 1,0 1,0 - 500 10 10 - 100 2 2,0 - 1000 20 20 - Graduated cylinders, PMP, tall shape with graduation/raised graduation
360 50 1 1,0 200 1000 10 10 440 100 1 1,0 250 2000 20 20 535 Graduated cylinders, PMP, tall shape with graduation and batch certificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1000 20 10 535 Nalgene Thermo Scientific - Graduated Cylinders Nalgene Thermo Scientificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1000 20 10 535 Nalgene Thermo Scientificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 1 0,5 200 1000 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440 100 10 5 440
offers synthetic graduated cylinders made from the materials PP and PMP. These product ranges are completely available at the analytics-shop.com. Thereby it is distinguished between the following classifications, PP grad. cylinders (type 1), economic PP grad. cylinders (type 2), PMP grad. cylinders (type 3) and economic grad. cylinders (type 4).
Detailed descriptions for every type can be found in the following. PP Graduated Cylinders (Type 1) Graduated cylinders of Nalgene Thermo Scientific made from PP are characterized by a wide spout as well as a blue pedestial. The graduation is incorporated. The cylinders are suited for chemical sterilization and food as well as drinks. Economic PP
Graduated Cylinders (Type 2) These PP graduated cylinders offer an excellent chemical resistance. Additionally, the cylinders are manufactured with a wide spout for an easy dispense of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. PMP Graduated Cylinders (Type 3) Using these PMP graduation cylinders
the precision requirements according to ASTM class B, E1272 and CFR21, part 177.1520 are fullfilled. All sizes are made with a wide spout and an incorporated, abrasion-resistant graduation. A big blue pedestial avoids tipping. These cylinders made from PMP are suited for chemical sterilization and food as well as drinks. Economic PMP Graduated
Cylinders (Type 4) These PMP cylinders offer an extraordinary chemical resistance as well as transparency and shock resistance. Furthermore the cylinders are characterized by a wide spout for an easy despence of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml] PP/PMP graduated cylinders 10 0,2 0,20 500 5 4,0 25 0,5 0,34 1000 10 6,0 50 1 0,50 2000 20 12,0 100 1 1,0 4000 50 29,0 25 0,5 - 500 5 - 50 1 - 1000 10 - 100 1 - Vitlab - Graduated Cylinders Graduated Cylinders Graduated Cylinders 10 0,2 - 250 2 - 25 0,5 - 500 5 - 50 1 - 1000 10 - 100 1 - Vitlab - Graduated Cylinders 
Cylinders of Vitlab are available in various configurations. The materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders wailable in various configurations. The materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders wailable in various configurations.
"in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to a max. temperature of 80 °C are possible without causing permanently exceeded error limits. It is distinguished between graduation
However, cylinders with a tall shape are delivered with a hexagonal pedestial with nubs and produced with a raised as well as with a blue raised graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, PP, class B, small shape, raised grad. 25
0,50 0,50 122 250 5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Graduated cylinders, PP, class B, tall shape, raised/raised blue grad. 10 0,20 0,20 145 250 2,0 2,0 315 25 0,50 0,50 170 500 5,0 360 50 1,0 1,0 200 1000 10 10 440 100 1,0 1,0 250 2000 20 20 482 PMP Graduated Cylinders PMP graduated
cylinders of Vitlab are crystal-clear and compliant certified. There are two different variant available, with raised grad. or with imprinted red grad. The cylinders are adjusted to "in". The batch certificate, which is part of the delivery, contains a batch number and the actual determined nominal volume under specification of the test conditions. The
resulting deviations from the nominal volume undercut the required limits of class A according to DIN 12681 and ISO 6706. The products are also available with a hexagonal pedestial to increase stability. Thermal load up to 121 °C will not cause any
permanently exceeded error limits. Nevertheless for PMP graduated cylinders with imprinted grad. cleaning at max. 60 °C are recommended to save the grad. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] From L
clear and adjusted to "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to max. 60 °C is possible without causing any permanently exceeded error limits. The graduation of these products is raised. It is distinguished between SAN graduated cylinders with a tall and a small shape.
First is delivered with a hexagonal pedestial with nubs. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, SAN, class B, small shape, raised grad. 25 0,5 0,5 122 250 5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Here
you can go back to the products. Page 2 Exact determination and measurement of volumes The closely calibrated scales of volumes. The products e.g. by Duran are available in two accuracy classes. The two classes differ in the accuracy of measurement: class A is the highest
accuracy class, class AS has the same tolerances as class A, but is designed to permit more rapid outflow. The accuracy of class B is approximately half that of class B is approximately half that of class A. Measuring and mixing cylinder are calibrated for IN, which means volumetric flasks and cylinders are calibrated to measure the amount of fluid contained. So e.g. the desired
concentration can be precisely set. Tips for heating volumetric glassware To ensure a long life-time for your measuring and mixing cylinder and to avoid volumetric glassware on a hot plate. The lab glassware should gradually be heated up
and cooled down to avoid thermal stresses and thus any possible breakage of the glass. Brand - Graduated Cylinders are made from glass
(boro silicate) as well as from synthetics (PP, PMP, SAN). Glass Cylinders The glass cylinders of Brand manufactured under the brand Blaubrand are made from high purity boro 3.3 according to DIN EN ISO 4788. All these glass products are characterized by a spout and a hexagonal base. For every graduated cylinder or mixing cylinder the batch number as well as an attached batch certificate per original package is available. On request Brand's cylinders are also obtainable with an individual certificate, USP certificate, use of the glass products are listed in the following. Thereby the cylinders are categorized: graduated cylinders Blaubrand
(type 1), graduated cylinders Blaubrand with certificate (type 2), graduated cylinder with pp stopper (type 4). Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm] Graduated cylinders Blaubrand 5 0,1 0,05 USP 115 250 2 1,0
USP 335 10 0,2 0,01 USP 140 500 5 2,5 USP 365 25 0,5 0,25 USP 170 1000 10 5 USP 465 50 1 0,5 USP 200 2000 20 10 USP 505 100 1 0,5 USP 260
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from glass Brand also offers products from the synthetics PP and PMP. Manufaturing takes place according to DIN 12 681 and ISO 6706. Therby the graduated cylinders are adjusted to "in". The max. thermal load is declared to 80 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused. Cleaning up to max.
60 °C is recommended to preserve marks and inscriptions. For the material PMP Brand declares that a thermal load up to 121 °C, which is needed for autoclave, does not cause permanently exceeded error limits. As for PP cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For applications, which require more frequent
autoclave, PMP graduated cylinders with raised graduation are advised. Graduated cylinders made from PP are available with a tall shape as well as with small shape as well as well as with small shape as well as
normal graduation on the one hand and a raised graduation on the other hand are available. On request PMP cylinders can be delivered with a batch certificate. Detailed descriptions about synthetic graduation cylinders can be found in the following. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Error Limit[
Limit[+/- ml] Height[mm] Graduated cylinders, PP, tall shape with graduation/raised graduation 25 0,5 0,5 170 500 5 5 360 50 1 1,0 200 1000 10 10 440 100 1 1,0 250 200 20 535 Graduated cylinders, PP, small shape with raised graduation 25 0,5 0,5 - 250 5 5,0 - 50 1,0 1,0 - 500 10 10 - 100 2 2,0 - 1000
                                                                                                                       10 0,2 0,20 145 250 2 2,0 315 25 0,5 0,5 170 500 5 5 360 50 1 1,0 200 1000 10 10 440 100 1 1,0 250 2000 20 20 535 Graduated cylinders, PMP, tall shape with graduation and batch certificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,25 170 500 5
20 20 - Graduated cylinders, PMP, tall shape with graduation/raised graduation
2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2000 20 10 535 Nalgene Thermo Scientific - Graduated Cylinders made from the materials PP and PMP. These product ranges are completely available at the analytics-shop.com. Thereby it is distinguished between the following
classifications, PP grad. cylinders (type 1), economic PP grad. cylinders (type 2), PMP grad. cylinders (type 3) and economic grad. cylinders (type 3) and economic grad. cylinders (type 4). Detailed descriptions for every type can be found in the following. PP Graduated Cylinders (type 3) and economic grad. cylinders (type 4).
well as a blue pedestial. The graduation is incorporated. The cylinders are suited for chemical sterilization and food as well as drinks. Economic PP Graduated Cylinders are manufactured with a wide spout for an easy dispense of liquids as well as
with an easily readable, permanent and abrasion-resistant graduation. PMP Graduated Cylinders (Type 3) Using these PMP graduation cylinders the precision requirements according to ASTM class B, E1272 and CFR21, part 177.1520 are fullfilled. All sizes are made with a wide spout and an incorporated, abrasion-resistant graduation. A big blue
pedestial avoids tipping. These cylinders are characterized by a wide spout for an easy
despence of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Volume[ml] Subdivision[ml] Error Limit[+/- ml] PP/PMP graduated cylinders 10 0,2 0,20 500 5 4,0 25 0,5 0,34 1000 10 6,0 50 1 0,50 2000 20 12,0 100 1 1,0 4000 50 29,0 250 2 2,0
 Economic PP/PMP graduated cylinders 10 0,2 - 250 2 - 25 0,5 - 500 5 - 50 1 - 1000 10 - 100 1 - Vitlab are available in various configurations. The materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding
 materials can be found in the following. PP Graduated Cylinders Vitlab's graduated cylinders made from PP are highly transparent and adjusted to "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to a max. temperature of 80 °C are possible without causing permanently exceeded
error limits. It is distinguished between graduated cylinders with a lower, cylinders with a maised graduation. However, cylinders with a hexagonal pedestial with nubs and produced with a raised graduation. However, cylinders with a blue raised graduation. Volume[ml] Subdivision[ml] Error Limit[+/-
                          Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, PP, class B, small shape, raised grad. 25 0,50 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 
25 0,50 0,50 170 500 5,0 5,0 360 50 1,0 1,0 200 1000 10 10 440 100 1,0 1,0 250 2000 20 482 PMP Graduated Cylinders PMP graduated cylinders PMP graduated cylinders of Vitlab are crystal-clear and compliant certified. There are two different variant available, with raised grad. or with imprinted red grad. The cylinders are adjusted to "in". The batch certificate,
which is part of the delivery, contains a batch number and the actual determined nominal volume under specification of the test conditions. The resulting deviations from the nominal volume under specification of the test conditions. The resulting deviations from the nominal volume under specification of the test conditions. The resulting deviations from the nominal volume under specification of the test conditions.
certificate. Vitlabs graduated cylinders are delivered with a hexagonal pedestial to increase stability. Thermal load up to 121 °C will not cause any permanently exceeded error limits. Nevertheless for PMP graduated cylinders with imprinted grad. cleaning at max. 60 °C are recommended to save the grad. Therefore, for frequently autoclaving we recommend a graduated cylinder with a raised grad. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] From Limit[+/- ml] Height[mm] From
200 1000 10 5,0 440 100 1,0 0,50 250 2000 20 10 482/535 SAN Graduated Cylinders of Vitlab made from SAN are crystal-clear and adjusted to "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to max. 60 °C is possible without causing any permanently
exceeded error limits. The graduation of these products is raised. It is distinguished between SAN graduated cylinders with a tall and a small shape. First is delivered with a hexagonal pedestial with nubs. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated
cylinders, SAN, class B, small shape, raised grad. 25 0,5 0,5 122 250 5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Here you can go back to the products. Page 3 Exact determination and measurement of volumes The closely calibrated scales of volumetric products allow very accurate determination and measurement of volumes The closely calibrated scales of volumetric products.
of volumes. The products e.g. by Duran are available in two accuracy classes. The two classes differ in the accuracy of measurement: class A is the highest accuracy of class B is approximately half that of class A. Measuring and mixing
cylinder are calibrated for IN, which means volumetric flasks and cylinders are calibrated to measure the amount of fluid contained. So e.g. the desired concentration can be precisely set. Tips for heating volumetric glassware To ensure a long life-time for your measuring and mixing cylinder and to avoid volume changes, the products should not be
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product range is available at the analytics-shop.com, offers among other things graduated cylinders and mixing cylinders. These products are made from glass (boro silicate) as well as from synthetics (PP, PMP, SAN). Glass Cylinders The glass cylinders of Brand manufactured under the brand Blaubrand are made from high purity boro 3.3 according
to DIN EN ISO 4788. All these glass products are characterized by a spout and a hexagonal base. For every graduated cylinder or mixing cylinder or mixing cylinder as well as an attached batch number as well as an attached batch number as well as an attached batch certificate per original package is available. On request Brand's cylinders are also obtainable with an individual certificate, USP certificate or DAkkS
calibration certificate. Detailed descriptions of the glass products are listed in the following. Thereby the cylinders Blaubrand with certificate (type 2), graduated cylinder Blaubrand Eterna (type 3) and mixing cylinder with pp stopper (type 4). Volume[ml] Subdivision[ml]
Error Limit*[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm] Graduated cylinders Blaubrand 5 0,1 0,05 USP 10 1000 10 5 USP 465 50 1 0,5 USP 200 2000 20 10 USP 505 100 1 0,5 USP 260
Volume[ml] Subdivision[ml] GrindingNS Height[mm] Volume[ml] Subdivision[ml] GrindingNS Height[mm] Mixing cylinders 10 0,2 10/19 160 250 2 29/32 350 25 0,5 14/23 190
500 5 34/35 395 50 1 19/26 220 1000 10 45/40 500 100 1 24/29 285
                                                                                                      * only valid for products with certificate Synthetics Besides graduated cylinders made from glass Brand also offers products from the synthetics PP and PMP. Manufaturing takes place according to DIN 12 681 and ISO 6706. Therby the graduated cylinders are adjusted to
 'in".The max. thermal load is declared to 80 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused. Cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For the material PMP Brand declares that a thermal load up to 121
 permanently exceeded error limits. As for PP cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For applications, which require more frequent autoclave, PMP graduated cylinders with small shape as well as with small shape. Furthermore
first is distinguished between normal and raised graduation. In comparison, PMP graduated cylinders are offered with a batch certificate. Detailed descriptions
 about synthetic graduation cylinders can be found in the following. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Fraduation village and the following in th
10 440 100 1 1,0 250 2000 20 20 535 Graduated cylinders, PP, small shape with raised graduation 25 0,5 0,5 - 250 5 5,0 - 50 1,0 1,0 - 500 10 10 - 100 2 2,0 - 1000 20 20 - Graduated cylinders, PMP, tall shape with graduation/raised graduation
100 1 1,0 250 2000 20 20 535 Graduated cylinders, PMP, tall shape with graduation and batch certificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2000 20 10 535 Nalgene Thermo Scientific - Graduated Cylinders Nalgene Thermo Scientific offers synthetic graduated
cylinders made from the materials PP and PMP. These product ranges are completely available at the analytics-shop.com. Thereby it is distinguished between the following classifications, PP grad. cylinders (type 3) and economic grad. cylinders (type 4). Detailed descriptions for every
type can be found in the following. PP Graduated Cylinders (Type 1) Graduated Cylinders of Nalgene Thermo Scientific made from PP are characterized by a wide spout as well as a blue pedestial. The graduated Cylinders (Type 2)
These PP graduated cylinders offer an excellent chemical resistance. Additionally, the cylinders are manufactured with a wide spout for an easy dispense of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. PMP Graduated Cylinders (Type 3) Using these PMP graduation cylinders the precision requirements
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PMP cylinders offer an extraordinary chemical resistance as well as transparency and shock resistance. Furthermore the cylinders are characterized by a wide spout for an easy despence of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml]
Subdivision[ml] Error Limit[+/- ml] PP/PMP graduated cylinders 10 0,2 0,20 500 5 4,0 25 0,5 0,34 1000 10 6,0 50 1 0,50 2000 20 12,0 100 1 1,0 4000 50 29,0 250 2 2,0 Economic PP/PMP graduated cylinders 10 0,2 - 25 0,5 - 500 5 - 50 1 - 1000 10 - 100 1 - Vitlab - Graduated Cylinders Graduated Cylinders of Vitlab
are available in various configurations. The materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders wanted cylinders wanted cylinders made from PP are highly transparent and adjusted to "in". The error limit
meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to a max. temperature of 80 °C are possible without causing permanently exceeded error limits. It is distinguished between graduation. However, cylinders
with a tall shape are delivered with a hexagonal pedestial with nubs and produced with a raised graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Wolume[ml] Subdivision[m
5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Graduated cylinders, PP, class B, tall shape, raised/raised blue grad. 10 0,20 0,20 145 250 2,0 2,0 163 1000 20 20 482 PMP Graduated Cylinders PMP graduated cylinders of Vitlab are
crystal-clear and compliant certified. There are two different variant available, with raised grad. or with imprinted red grad. The cylinders are adjusted to "in". The batch certificate, which is part of the delivery, contains a batch number and the actual determined nominal volume under specification of the test conditions. The resulting deviations from
the nominal volume undercut the required limits of class A according to DIN 12681 and ISO 6706. The products are also available with a DAkkS calibration certificate or individual certificate or individual certificate or individual certificate. Vitlabs graduated cylinders are delivered with a DAkkS calibration certificate or individual certificate.
error limits. Nevertheless for PMP graduated cylinders with imprinted grad. cleaning at max. 60 °C are recommended to save the grad. Therefore, for frequently autoclaving we recommend a graduated cylinder with a raised grad. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml]
Height[mm] Graduated cylinders, PMP, class A, KP, tall shape, raised grad./imprinted red grad. 10 0,20 0,1 145 250 2,0 1,0 315 25 0,50 0,25 170 500 5,0 2,5 360 50 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 100 10 5,0 440 100 1,0 0,50 250 200 1000 10 5,0 440 1000 10 5,0 440 100 10 5,0 440 1000 10 5,0 440 100 10 5,0 440 100 10 5,0 440 100 10 5,0 440 100 
 "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to max. 60 °C is possible without causing any permanently exceeded error limits. The graduation of these products is raised. It is distinguished between SAN graduated cylinders with a tall and a small shape. First is delivered with a
hexagonal pedestial with nubs. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, SAN, class B, small shape, raised grad. 25 0,5 0,5 122 250 5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Here you can go back to the
products. Page 4 Exact determination and measurement of volumes. The closely calibrated scales of volumetric products e.g. by Duran are available in two accuracy classes. The two classes differ in the accuracy of measurement of volumes. The products e.g. by Duran are available in two accuracy classes.
AS has the same tolerances as class A, but is designed to permit more rapid outflow. The accuracy of class B is approximately half that of class B
set. Tips for heating volumetric glassware To ensure a long life-time for your measuring and mixing cylinder and to avoid volume tric glassware on a hot plate. The lab glassware should gradually be heated up and cooled down to avoid
thermal stresses and thus any possible breakage of the glass. Brand - Graduated Cylinders and Mixing Cylinders and mixing cylinders and mixing cylinders and mixing cylinders are made from glass (boro silicate) as well as
from synthetics (PP, PMP, SAN). Glass Cylinders The glass cylinders of Brand manufactured under the batch number as well as an exagonal base. For every graduated cylinder or mixing cylinder the batch number as well as an
attached batch certificate per original package is available. On request Brand's cylinders are also obtainable with an individual certificate or DAkkS calibration certificate or DAkkS calibration certificate. Detailed descriptions of the glass products are listed in the following. Thereby the cylinders are categorized: graduated cylinders are also obtainable with an individual certificate or DAkkS calibration certificate.
cylinders Blaubrand with certificate (type 2), graduated cylinder Blaubrand Eterna (type 3) and mixing cylinder with pp stopper (type 4). Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm]
                                                                                                                                                                                                                                                                                      Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm] Graduated cylinders Blaubrand 5 0,1 0,05 USP 115 250 2 1,0 USP 335 10 0,2
                                                                                                                                                                                                                     Graduated cylinders Blaubrand Eterna 5 0,1 - 115 250 2 - 335 10 0,2 - 140 500 5 - 365 25 0,5 - 170 1000 10 - 465 50 1 - 200 2000 20 - 505 100 1 - 260
Subdivision[ml] GrindingNS Height[mm] Volume[ml] Subdivision[ml] GrindingNS Height[mm] Wixing cylinders 10 0,2 10/19 160 250 2 29/32 350 25 0,5 14/23 190 500 5 34/35 395 50 1 19/26 220 1000 10 45/40 500 100 1 24/29 285
Brand also offers products from the synthetics PP and PMP. Manufaturing takes place according to DIN 12 681 and ISO 6706. Therby the graduated cylinders are adjusted to "in". The max. thermal load is declared to 80 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused. Cleaning up to max. 60 °C is
recommended to preserve marks and inscriptions. For the material PMP Brand declares that a thermal load up to 121 °C, which is needed for autoclave, does not cause permanently exceeded error limits. As for PP cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For applications, which require more frequent autoclave,
PMP graduated cylinders with raised graduation are advised. Graduated cylinders made from PP are available with a tall shape as well as with small shape. Furthermore, first is distinguished between normal and raised graduation. In comparison, PMP graduated cylinders are offered with a tall shape exclusively, whereby cylinders with a normal
graduation on the one hand and a raised graduation on the other hand are available. On request PMP cylinders can be found in the following. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error
10 0,2 0,20 145 250 2 2,0 315 25 0,5 0,5 170 500 5 5 360 50 1 1,0 200 1000 10 10 440 100 1 1,0 250 2000 20 20 535 Graduated cylinders, PMP, tall shape with graduation and batch certificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,5 170 500 5
2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2000 20 10 535 Nalgene Thermo Scientific - Graduated Cylinders Made from the materials PP and PMP. These product ranges are completely available at the analytics-shop.com. Thereby it is distinguished between the following
classifications, PP grad. cylinders (type 1), economic PP grad. cylinders (type 2), PMP grad. cylinders (type 3) and economic grad. cylinders (type 3) and economic grad. cylinders (type 4). Detailed descriptions for every type can be found in the following. PP Graduated Cylinders (type 3) and economic grad. cylinders (type 4).
well as a blue pedestial. The graduation is incorporated. The cylinders are suited for chemical sterilization and food as well as drinks. Economic PP Graduated Cylinders are manufactured with a wide spout for an easy dispense of liquids as well as
with an easily readable, permanent and abrasion-resistant graduation. PMP Graduated Cylinders (Type 3) Using these PMP graduation cylinders the precision requirements according to ASTM class B, E1272 and CFR21, part 177.1520 are fullfilled. All sizes are made with a wide spout and an incorporated, abrasion-resistant graduation. A big blue
despence of liquids as well as with an easily readable, permanent and abrasion-resistant graduated cylinders 10 0,2 0,20 500 5 4,0 25 0,5 0,34 1000 10 6,0 50 1 0,50 2000 20 12,0 100 1 1,0 4000 50 29,0 250 2 2,0
                                                                                                                                                 Vitlab - Graduated Cylinders Graduated Cylinders of Vitlab are available in various configurations. The materials used for production are PP, PMP and SAN. Detailed information about graduated calinders manufactured from the corresponding
 materials can be found in the following. PP Graduated Cylinders Vitlab's graduated cylinders made from PP are highly transparent and adjusted to "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to a max. temperature of 80 °C are possible without causing permanently exceeded
error limits. It is distinguished between graduated cylinders with a blue raised graduation. Volume[ml] Subdivision[ml] Error Limit[+/-
                          Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, PP, class B, small shape, raised grad. 25 0,50 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 1,0 142 500 
25 0,50 0,50 170 500 5,0 5,0 360 50 1,0 1,0 200 1000 10 10 440 100 1,0 250 2000 20 482 PMP Graduated cylinders PMP graduated cylinders PMP graduated cylinders of Vitlab are crystal-clear and compliant certified. There are two different variant available, with raised grad. or with imprinted red grad. The cylinders are adjusted to "in". The batch certificate,
which is part of the delivery, contains a batch number and the actual determined nominal volume under specification of the test conditions. The resulting deviations from the nominal volume under specification of the test conditions. The resulting deviations from the nominal volume under specification of the test conditions.
certificate. Vitlabs graduated cylinders are delivered with a hexagonal pedestial to increase stability. Thermal load up to 121 °C will not cause any permanently exceeded error limits. Nevertheless for PMP graduated cylinders with imprinted grad. cleaning at max. 60 °C are recommended to save the grad. Therefore, for frequently autoclaving we
recommend a graduated cylinder with a raised grad. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, PMP, class A, KP, tall shape, raised grad. 10 0,20 0,1 145 25 0,50 0,25 170 500 5,0 2,5 360 50 1,0 0,50
200 1000 10 5,0 440 100 1,0 0,50 250 2000 20 10 482/535 SAN Graduated Cylinders Graduated Cylinders of Vitlab made from SAN are crystal-clear and adjusted to "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to max. 60 °C is possible without causing any permanently
exceeded error limits. The graduation of these products is raised. It is distinguished between SAN graduated cylinders with a tall and a small shape. First is delivered with a hexagonal pedestial with nubs. Volume[ml] Error Limit[+/- ml] Height[mm] Graduated
cylinders, SAN, class B, small shape, raised grad. 25 0,5 0,5 122 250 5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Here you can go back to the products allow very accurate determination and measurement of volumes The closely calibrated scales of volumetric products allow very accurate determination and measurement of volumes The closely calibrated scales of volumetric products. Page 5 Exact determination and measurement of volumetric products allow very accurate determination and measurement of volumetric products.
of volumes. The products e.g. by Duran are available in two accuracy classes. The two classes differ in the accuracy of measurement: class A is the highest accuracy of class B is approximately half that of class A. Measuring and mixing
cylinder are calibrated for IN, which means volumetric flasks and cylinders are calibrated to measure the amount of fluid contained. So e.g. the desired concentration can be precisely set. Tips for heating volumetric glassware To ensure a long life-time for your measuring and mixing cylinder and to avoid volume changes, the products should not be
heated above +180°C in drying cabinets or sterilisers. Do not heat volumetric glassware on a hot plate. The lab glassware should gradually be heated up and cooled down to avoid thermal stresses and thus any possible breakage of the glass. Brand - Graduated Cylinders and Mixing Cylinders Brand a manufacturer of lab supply, whose complete
product range is available at the analytics-shop.com, offers among other things graduated cylinders and mixing cylinders. These products are made from synthetics (PP, PMP, SAN). Glass Cylinders of Brand manufactured under the brand Blaubrand are made from high purity boro 3.3 according
to DIN EN ISO 4788. All these glass products are characterized by a spout and a hexagonal base. For every graduated cylinder or mixing cylinder the batch number as well as an attached batch certificate per original package is available. On request Brand's cylinders are also obtainable with an individual certificate, USP certificate or DAkkS
calibration certificate. Detailed descriptions of the glass products are listed in the following. Thereby the cylinders Blaubrand (type 1), graduated cylinders Blaubrand (type 2), graduated cylinders Blaubrand (type 3) and mixing cylinders blaubrand (type 4). Volume[ml] Subdivision[ml]
                                                Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm] Graduated cylinders Blaubrand 5 0,1 0,05 USP 115 250 2 1,0 USP 335 10 0,2 0,01 USP 170 1000 10 5 USP 465 50 1 0,5 USP 200 2000 20 10 USP 505 100 1 0,5 USP 260
 cylinders Blaubrand Eterna 50,1-115 2502-335100,2-140 5005-365250,5-170 100010-465501-200 200020-5051001-260
                                                                                                                                                                                                                                Volume[ml] Subdivision[ml] GrindingNS Height[mm] Volume[ml] Subdivision[ml] GrindingNS Height[mm] Mixing cylinders 10 0,2 10/19 160 250 2 29/32 350 25 0,5 14/23 190
                                                                                                      * only valid for products with certificate Synthetics Besides graduated cylinders made from glass Brand also offers products from the synthetics PP and PMP. Manufaturing takes place according to DIN 12 681 and ISO 6706. Therby the graduated cylinders are adjusted to
"in". The max. thermal load is declared to 80 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused. Cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For the material PMP Brand declares that a thermal load up to 121 °C, which is needed for autoclave, does not cause
permanently exceeded error limits. As for PP cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For applications, which require more frequent autoclave, PMP graduated cylinders with small shape as well as with small shape. Furthermore
first is distinguished between normal and raised graduation. In comparison, PMP graduated cylinders are offered with a batch certificate. Detailed descriptions
about synthetic graduation cylinders can be found in the following. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Height[mm] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] He
10 440 100 1 1,0 250 2000 20 20 535 Graduated cylinders, PP, small shape with raised graduation 25 0,5 0,5 - 250 5 5,0 - 50 1,0 1,0 - 500 10 10 - 100 2 2,0 - 1000 20 20 - Graduated cylinders, PMP, tall shape with graduation/raised graduation
100 1 1,0 250 2000 20 20 535 Graduated cylinders, PMP, tall shape with graduation and batch certificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2000 20 10 535 Nalgene Thermo Scientific - Graduated Cylinders Nalgene Thermo Scientific offers synthetic graduated
cylinders made from the materials PP and PMP. These product ranges are completely available at the analytics-shop.com. Thereby it is distinguished between the following classifications, PP grad. cylinders (type 3) and economic grad. cylinders (type 4). Detailed descriptions for every
type can be found in the following. PP Graduated Cylinders (Type 1) Graduated Cylinders of Nalgene Thermo Scientific made from PP are characterized by a wide spout as well as a blue pedestial. The graduated Cylinders (Type 2)
These PP graduated cylinders offer an excellent chemical resistance. Additionally, the cylinders are manufactured with a wide spout for an easy dispense of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. PMP Graduated Cylinders (Type 3) Using these PMP graduation cylinders the precision requirements
 according to ASTM class B, E1272 and CFR21, part 177.1520 are fullfilled. All sizes are made with a wide spout and an incorporated, abrasion-resistant graduation and food as well as drinks. Economic PMP Graduated Cylinders (Type 4) These
PMP cylinders offer an extraordinary chemical resistance as well as transparency and shock resistance. Furthermore the cylinders are characterized by a wide spout for an easy despence of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml]
Subdivision[ml] Error Limit[+/- ml] PP/PMP graduated cylinders 10 0,2 0,20 500 5 4,0 25 0,5 0,34 1000 10 6,0 50 1 0,50 2000 20 12,0 100 1 1,0 4000 50 29,0 Economic PP/PMP graduated cylinders 10 0,2 - 25 0,5 - 500 5 - 50 1 - 1000 10 - 1000 1 - 1000 1 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000 10 - 1000
are available in various configurations. The materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials can be found in the following. PP Graduated cylinders manufactured from the corresponding materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials can be found in the following.
meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to a max. temperature of 80 °C are possible without causing permanently exceeded error limits. It is distinguished between graduation. However, cylinders
with a tall shape are delivered with a hexagonal pedestial with nubs and produced with a raised graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Subd
5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Graduated cylinders, PP, class B, tall shape, raised/raised blue grad. 10 0,20 1,0 1,0 1,0 250 200 10 10 1,0 1,0 250 200 20 482 PMP Graduated Cylinders PMP graduated cylinders of Vitlab are
crystal-clear and compliant certified. There are two different variant available, with raised grad. or with imprinted red grad. The cylinders are adjusted to "in". The batch certificate, which is part of the delivery, contains a batch number and the actual determined nominal volume under specification of the test conditions. The resulting deviations from
the nominal volume undercut the required limits of class A according to DIN 12681 and ISO 6706. The products are also available with a DAkkS calibration certificate or individual certificate or individual certificate or individual certificate. Vitlabs graduated cylinders are delivered with a DAkkS calibration certificate or individual certificate.
error limits. Nevertheless for PMP graduated cylinders with imprinted grad. cleaning at max. 60 °C are recommended to save the grad. Therefore, for frequently autoclaving we recommend a graduated cylinder with a raised grad. Volume[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml]
                  Graduated cylinders, PMP, class A, KP, tall shape, raised grad./imprinted red grad. 100,200,1145 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 2502,01,0315 25020,01,0315 25020,01,0315 25020,01,0315 25020,01,0315 25020,01,0315 25020,01,0315 25020,01,0315 25020,01,0315 25020,01,0315 25020,01,0315
 "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to max. 60 °C is possible without causing any permanently exceeded error limits. The graduation of these products is raised. It is distinguished between SAN graduated cylinders with a tall and a small shape. First is delivered with a
hexagonal pedestial with nubs. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, SAN, class B, small shape, raised grad. 25 0,5 0,5 122 250 5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Here you can go back to the
products. Page 6 Exact determination and measurement of volumes. The closely calibrated scales of volumes accuracy classes. The two classes differ in the accuracy of measurement of volumes. The products e.g. by Duran are available in two accuracy classes, class
AS has the same tolerances as class A, but is designed to permit more rapid outflow. The accuracy of class B is approximately half that of class B
set. Tips for heating volumetric glassware To ensure a long life-time for your measuring and mixing cylinder and to avoid volume changes, the products should not be heated up and cooled down to avoid
thermal stresses and thus any possible breakage of the glass. Brand - Graduated Cylinders and Mixing Cylinders and Mixing cylinders and mixing cylinders and mixing cylinders are made from glass (boro silicate) as well as
from synthetics (PP, PMP, SAN). Glass Cylinders of Brand manufactured under the batch number as well as an exagonal base. For every graduated cylinder or mixing cylinder the batch number as well as an
attached batch certificate per original package is available. On request Brand's cylinders are also obtainable with an individual certificate or DAkkS calibration certificate or DAkkS calibration certificate. Detailed descriptions of the glass products are listed in the following. Thereby the cylinders are categorized: graduated cylinders are also obtainable with an individual certificate or DAkkS calibration certificate.
cylinders Blaubrand with certificate (type 2), graduated cylinder Blaubrand Eterna (type 3) and mixing cylinder with pp stopper (type 4). Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm] Graduated cylinders Blaubrand 5 0,1 0,05 USP 115 250 2 1,0 USP 335 10 0,2
                                                                                                                                                                                                                     Graduated cylinders Blaubrand Eterna 5 0,1 - 115 250 2 - 335 10 0,2 - 140 500 5 - 365 25 0,5 - 170 1000 10 - 465 50 1 - 200 2000 20 - 505 100 1 - 260
0,01 USP 140 500 5 2,5 USP 365 25 0,5 0,25 USP 170 1000 10 5 USP 465 50 1 0,5 USP 200 2000 20 10 USP 505 100 1 0,5 USP 260
Subdivision[ml] GrindingNS Height[mm] Volume[ml] Subdivision[ml] GrindingNS Height[mm] Wixing cylinders 10 0,2 10/19 160 250 2 29/32 350 25 0,5 14/23 190 500 5 34/35 395 50 1 19/26 220 1000 10 45/40 500 100 1 24/29 285
                                                                                                                                                                                                                                                                                                                                                      * only valid for products with certificate Synthetics Besides graduated cylinders made from glass
Brand also offers products from the synthetics PP and PMP. Manufaturing takes place according to DIN 12 681 and ISO 6706. Therby the graduated cylinders are adjusted to "in". The max. thermal load is declared to 80 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused. Cleaning up to max. 60 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused. Cleaning up to max. 60 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused.
recommended to preserve marks and inscriptions. For the material PMP Brand declares that a thermal load up to 121 °C, which is needed for autoclave, does not cause permanently exceeded error limits. As for PP cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For applications, which require more frequent autoclave,
PMP graduated cylinders with raised graduation are advised. Graduated cylinders made from PP are available with a tall shape as well as with small shape. Furthermore, first is distinguished between normal and raised graduation. In comparison, PMP graduated cylinders are offered with a tall shape exclusively, whereby cylinders with a normal
graduation on the one hand and a raised graduation on the other hand are available. On request PMP cylinders can be found in the following. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Subdivision[ml] Error Limit[+/- ml] Height[mm] Sub
20 20 - Graduated cylinders, PMP, tall shape with graduation/raised graduation
                                                                                                                       10 0,2 0,20 145 250 2 2,0 315 25 0,5 0,5 170 500 5 5 360 50 1 1,0 200 1000 10 10 440 100 1 1,0 250 2000 20 20 535 Graduated cylinders, PMP, tall shape with graduation and batch certificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,5 0,5 170 500 5
2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2000 20 10 535 Nalgene Thermo Scientific - Graduated Cylinders made from the materials PP and PMP. These product ranges are completely available at the analytics-shop.com. Thereby it is distinguished between the following
classifications, PP grad. cylinders (type 1), economic PP grad. cylinders (type 2), PMP grad. cylinders (type 3) and economic grad. cylinders (type 4). Detailed descriptions for every type can be found in the following. PP Graduated Cylinders (type 4).
well as a blue pedestial. The graduation is incorporated. The cylinders are suited for chemical sterilization and food as well as drinks. Economic PP Graduated Cylinders are manufactured with a wide spout for an easy dispense of liquids as well as
with an easily readable, permanent and abrasion-resistant graduation. PMP Graduated Cylinders (Type 3) Using these PMP graduation reguirements according to ASTM class B, E1272 and CFR21, part 177.1520 are fullfilled. All sizes are made with a wide spout and an incorporated, abrasion-resistant graduation. A big blue
pedestial avoids tipping. These cylinders made from PMP are suited for chemical sterilization and food as well as drinks. Economic PMP Graduated Cylinders are characterized by a wide spout for an easy
despence of liquids as well as with an easily readable, permanent and abrasion-resistant graduated cylinders 10 0,2 0,20 500 5 4,0 25 0,5 0,34 1000 10 6,0 50 1 0,50 2000 20 12,0 100 1 1,0 4000 50 29,0 250 2 2,0
 Economic PP/PMP graduated cylinders 10 0,2 - 25 0,5 - 500 5 - 50 1 - 1000 10 - 100 1 - Vitlab are available in various configurations. The materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding
materials can be found in the following. PP Graduated Cylinders Witlab's graduated cylinders made from PP are highly transparent and adjusted to "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to a max. temperature of 80 °C are possible without causing permanently exceeded
error limits. It is distinguished between graduated cylinders with a lexagonal pedestial with a maised graduation. However, cylinders with a blue raised graduation. Volume[ml] Subdivision[ml] Error Limit[+/-
                            Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, PP, class B, small shape, raised grad. 25 0,50 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 2,0 2,0 315
25 0,50 0,50 170 500 5,0 5,0 360 50 1,0 1,0 200 1000 10 10 440 100 1,0 250 2000 20 482 PMP Graduated Cylinders PMP graduated cylinders of Vitlab are crystal-clear and compliant certified. There are two different variant available, with raised grad. or with imprinted red grad. The cylinders are adjusted to "in". The batch certificate,
which is part of the delivery, contains a batch number and the actual determined nominal volume under specification of the test conditions. The resulting deviations from the nominal volume under specification of the test conditions. The resulting deviations from the nominal volume under specification of the test conditions.
certificate. Vitlabs graduated cylinders are delivered with a hexagonal pedestial to increase stability. Thermal load up to 121 °C will not cause any permanently exceeded error limits. Nevertheless for PMP graduated cylinders with imprinted grad. cleaning at max. 60 °C are recommended to save the grad. Therefore, for frequently autoclaving we
recommend a graduated cylinder with a raised grad. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, PMP, class A, KP, tall shape, raised grad. 10 0,20 0,1 145 25 0,50 0,25 170 500 5,0 2,5 360 50 1,0 0,50
200 1000 10 5,0 440 100 1,0 0,50 250 2000 20 10 482/535 SAN Graduated Cylinders of Vitlab made from SAN are crystal-clear and adjusted to "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to max. 60 °C is possible without causing any permanently
exceeded error limits. The graduation of these products is raised. It is distinguished between SAN graduated cylinders with a tall and a small shape. First is delivered with a hexagonal pedestial with nubs. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated
cylinders, SAN, class B, small shape, raised grad. 25 0,5 0,5 122 250 5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Here you can go back to the products. Page 7 Exact determination and measurement of volumes The closely calibrated scales of volumetric products allow very accurate determination and measurement of volumes The closely calibrated scales of volumetric products.
of volumes. The products e.g. by Duran are available in two accuracy classes. The two classes differ in the accuracy of measurement: class A is the highest accuracy of class B is approximately half that of class A. Measuring and mixing
cylinder are calibrated for IN, which means volumetric flasks and cylinders are calibrated to measure the amount of fluid contained. So e.g. the desired concentration can be precisely set. Tips for heating volumetric glassware To ensure a long life-time for your measuring and mixing cylinder and to avoid volume changes, the products should not be
heated above +180°C in drying cabinets or sterilisers. Do not heat volumetric glassware on a hot plate. The lab glassware should gradually be heated up and cooled down to avoid thermal stresses and thus any possible breakage of the glass. Brand - Graduated Cylinders and Mixing Cylinders Brand a manufacturer of lab supply, whose complete
product range is available at the analytics-shop, com, offers among other things graduated cylinders and mixing cylinders. These products are made from glass (boro silicate) as well as from synthetics (PP. PMP. SAN). Glass Cylinders are made from glass (boro silicate) as well as from synthetics (PP. PMP. SAN).
to DIN EN ISO 4788. All these glass products are characterized by a spout and a hexagonal base. For every graduated cylinder or mixing cylinders are also obtainable with an individual certificate, USP certificate or DAkkS
calibration certificate. Detailed descriptions of the glass products are listed in the following. Thereby the cylinders Blaubrand with certificate (type 2), graduated cylinder Blaubrand Eterna (type 3) and mixing cylinder with pp stopper (type 4). Volume[ml] Subdivision[ml]
Error Limit*[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm] Graduated cylinders Blaubrand 5 0,1 0,05 USP 140 500 5 2,5 USP 365 25 0,5 0,25 USP 170 1000 10 5 USP 465 50 1 0,5 USP 200 2000 20 10 USP 505 100 1 0,5 USP 260
cylinders Blaubrand Eterna 5 0,1 - 115 250 2 - 335 10 0,2 - 140 500 5 - 365 25 0,5 - 170 1000 10 - 465 50 1 - 200 2000 20 - 505 100 1 - 260
                                                                                                                                                                                                                                Volume[ml] Subdivision[ml] GrindingNS Height[mm] Volume[ml] Subdivision[ml] GrindingNS Height[mm] Mixing cylinders 10 0,2 10/19 160 250 2 29/32 350 25 0,5 14/23 190
500 5 34/35 395 50 1 19/26 220 1000 10 45/40 500 100 1 24/29 285
                                                                                                        * only valid for products with certificate Synthetics Besides graduated cylinders made from glass Brand also offers products from the synthetics PP and PMP. Manufaturing takes place according to DIN 12 681 and ISO 6706. Therby the graduated cylinders are adjusted to
"in". The max. thermal load is declared to 80 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused. Cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For the material PMP Brand declares that a thermal load up to 121 °C, which is needed for autoclave, does not cause
permanently exceeded error limits. As for PP cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For applications, which require more frequent autoclave, PMP graduated cylinders with small shape. Furthermore
first is distinguished between normal and raised graduation. In comparison, PMP graduated cylinders are offered with a batch certificate. Detailed descriptions
about synthetic graduation cylinders can be found in the following. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Height[mm] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Height[m
10 440 100 1 1,0 250 2000 20 20 535 Graduated cylinders, PP, small shape with raised graduation 25 0,5 0,5 - 250 5 5,0 - 50 1,0 1,0 - 500 10 10 - 100 2 2,0 - 1000 20 20 - Graduated cylinders, PMP, tall shape with graduation/raised graduation
                                                                                                                                                                                                                                                                                                                                                              10 0,2 0,20 145 250 2 2,0 315 25 0,5 0,5 170 500 5 5 360 50 1 1,0 200 1000 10 10 440
100 1 1,0 250 2000 20 20 535 Graduated cylinders, PMP, tall shape with graduation and batch certificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2000 20 10 535 Nalgene Thermo Scientific - Graduated Cylinders Nalgene Thermo Scientific offers synthetic graduated
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cylinders made from the materials PP and PMP. These product ranges are completely available at the analytics-shop.com. Thereby it is distinguished between the following classifications, PP grad. cylinders (type 2), PMP grad. cylinders (type 3) and economic grad. cylinders (type 4). Detailed descriptions for every type can be found in the following. PP Graduated Cylinders (Type 1) Graduated Cylinders (Type 2) are characterized by a wide spout as well as a blue pedestial. The graduation is incorporated. The cylinders (Type 2)

These PP graduated cylinders offer an excellent chemical resistance. Additionally, the cylinders are manufactured with a wide spout for an easy dispense of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. PMP Graduated Cylinders (Type 3) Using these PMP graduation cylinders the precision requirements according to ASTM class B, E1272 and CFR21, part 177.1520 are fullfilled. All sizes are made with a wide spout and an incorporated, abrasion-resistant graduation. A big blue pedestial avoids tipping. These cylinders (Type 4) These PMP cylinders offer an extraordinary chemical resistance as well as transparency and shock resistance as well as with an easily readable, permanent and abrasion-resistant graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Subdivision[ml] Error Limit[+/- ml] PP/PMP graduated cylinders 10 0,2 0,20 500 5 4,0 25 0,5 0,34 1000 10 6,0 50 1 0,50 2000 20 12,0 100 1 1,0 4000 50 29,0 250 2 2,0 Economic PP/PMP graduated cylinders 10 0,2 - 250 2 - 25 0,5 - 500 5 - 50 1 - 1000 10 - 100 1 -Vitlab - Graduated Cylinders Graduated Cylinders of Vitlab are available in various configurations. The materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials used for production are pp. PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials used for production are pp. PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials used from the corresponding materials are pp. PMP and SAN. Detailed information are pp. PMP and SAN. Detailed inf meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to a max, temperature of 80 °C are possible without causing permanently exceeded error limits. It is distinguished between graduated cylinders with tall shape and ones with a small shape. Latters are made with a raised graduation. However, cylinders with a tall shape are delivered with a hexagonal pedestial with nubs and produced with a raised graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, PP, class B, small shape, raised grad. 25 0,50 0,50 122 250 5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Graduated cylinders, PP, class B, tall shape, raised/raised blue grad. 10 0,20 1,0 1,0 1,0 250 2000 20 20 482 PMP Graduated Cylinders PMP graduated cylinders of Vitlab are crystal-clear and compliant certified. There are two different variant available, with raised grad. or with imprinted red grad. The cylinders are adjusted to "in". The batch certificate, which is part of the delivery, contains a batch number and the actual determined nominal volume under specification of the test conditions. The resulting deviations from the nominal volume undercut the required limits of class A according to DIN 12681 and ISO 6706. The products are also available with a DAkkS calibration certificate or individual certificate or individual certificate or individual certificate. Vitlabs graduated cylinders are delivered with a DAkkS calibration certificate or individual certificate. error limits. Nevertheless for PMP graduated cylinders with imprinted grad. cleaning at max. 60 °C are recommended to save the grad. Therefore, for frequently autoclaving we recommend a graduated cylinder with a raised grad. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to max. 60 °C is possible without causing any permanently exceeded error limits. The graduation of these products is raised. It is distinguished between SAN graduated cylinders with a tall and a small shape. First is delivered with a hexagonal pedestial with nubs. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Height[mm] Wolume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Height products. Page 8 Exact determination and measurement of volumes. The closely calibrated scales of volumetric products e.g. by Duran are available in two accuracy classes. The two classes differ in the accuracy of measurement of volumes. The products e.g. by Duran are available in two accuracy classes, class AS has the same tolerances as class A, but is designed to permit more rapid outflow. The accuracy of class B is approximately half that of class B set. Tips for heating volumetric glassware To ensure a long life-time for your measuring and mixing cylinder and to avoid volume changes, the products should not be heated up and cooled down to avoid thermal stresses and thus any possible breakage of the glass. Brand - Graduated Cylinders and Mixing Cylinders and mixing cylinders and mixing cylinders and mixing cylinders are made from glass (boro silicate) as well as from synthetics (PP, PMP, SAN). Glass Cylinders The glass cylinders of Brand manufactured under the batch number as well as an exagonal base. For every graduated cylinder or mixing cylinder the batch number as well as an attached batch certificate per original package is available. On request Brand's cylinders are also obtainable with an individual certificate or DAkkS calibration certificate or DAkkS calibration certificate. Detailed descriptions of the glass products are listed in the following. Thereby the cylinders are categorized: graduated cylinders are also obtainable with an individual certificate or DAkkS calibration certificate. cylinders Blaubrand with certificate (type 2), graduated cylinder Blaubrand Eterna (type 3) and mixing cylinder with pp stopper (type 4). Volume[ml] Subdivision[ml] Error Limit*[+/- ml] Height[mm] Graduated cylinders Blaubrand 5 0,1 0,05 USP 115 250 2 1,0 USP 335 10 0,2 Graduated cylinders Blaubrand Eterna 5 0,1 - 115 250 2 - 335 10 0,2 - 140 500 5 - 365 25 0,5 - 170 1000 10 - 465 50 1 - 200 2000 20 - 505 100 1 - 260 0,01 USP 140 500 5 2,5 USP 365 25 0,5 0,25 USP 170 1000 10 5 USP 465 50 1 0,5 USP 200 2000 20 10 USP 505 100 1 0,5 USP 260 Volume[ml] Subdivision[ml] GrindingNS Height[mm] Volume[ml] Subdivision[ml] GrindingNS Height[mm] Volume[ml] Subdivision[ml] GrindingNS Height[mm] Volume[ml] Subdivision[ml] GrindingNS Height[mm] Mixing cylinders 10 0,2 10/19 160 250 2 29/32 350 25 0,5 14/23 190 500 5 34/35 395 50 1 19/26 220 1000 10 45/40 500 100 1 24/29 285 * only valid for products with certificate Synthetics Besides graduated cylinders made from glass Brand also offers products from the synthetics PP and PMP. Manufaturing takes place according to DIN 12 681 and ISO 6706. Therby the graduated cylinders are adjusted to "in". The max. thermal load is declared to 80 °C for the synthetic PP. At this max. temperature no permanently exceeded error limits are caused. Cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For the material PMP Brand declares that a thermal load up to 121 °C, which is needed for autoclave, does not cause permanently exceeded error limits. As for PP cleaning up to max. 60 °C is recommended to preserve marks and inscriptions. For applications, which require more frequent autoclave, PMP graduated cylinders with raised graduation are advised. Graduated cylinders made from PP are available with a tall shape as well as with small shape as well as with small shape. Furthermore, first is distinguished between normal and raised graduation. In comparison, PMP graduated cylinders with a tall shape as well as with small shape as well as with small shape. graduation on the one hand and a raised graduation on the other hand are available. On request PMP cylinders can be found in the following. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error 20 20 - Graduated cylinders, PMP, tall shape with graduation/raised graduation 10 0,2 0,20 145 250 2 2,0 315 25 0,5 0,5 170 500 5 5 360 50 1 1,0 200 1000 10 10 440 100 1 1,0 250 2000 20 20 535 Graduated cylinders, PMP, tall shape with graduation and batch certificate 10 0,2 0,10 145 250 2 1,0 315 25 0,5 0,25 170 500 5 2,5 360 50 1 0,5 200 1000 10 5 440 100 1 0,5 250 2000 20 10 535 Nalgene Thermo Scientific - Graduated Cylinders Malgene Thermo Scientific offers synthetic graduated cylinders made from the materials PP and PMP. These product ranges are completely available at the analytics-shop.com. Thereby it is distinguished between the following classifications, PP grad. cylinders (type 1), economic PP grad. cylinders (type 2), PMP grad. cylinders (type 3) and economic grad. cylinders (type 3) and economic grad. cylinders (type 4). Detailed descriptions for every type can be found in the following. PP Graduated Cylinders (type 1) Graduated cylinders (type 2), PMP grad. cylinders (type 3) and economic grad. cylinders (type 3) and economic grad. cylinders (type 4). well as a blue pedestial. The cylinders are manufactured with a wide spout for an easy dispense of liquids as well as drinks. Economic PP Graduated Cylinders are manufactured with a wide spout for an easy dispense of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. PMP Graduated Cylinders (Type 3) Using these PMP graduation cylinders the precision requirements according to ASTM class B, E1272 and CFR21, part 177.1520 are fullfilled. All sizes are made with a wide spout and an incorporated, abrasion-resistant graduation. A big blue pedestial avoids tipping. These cylinders made from PMP are suited for chemical sterilization and food as well as transparency and shock resistance. Furthermore the cylinders are characterized by a wide spout for an easy despence of liquids as well as with an easily readable, permanent and abrasion-resistant graduation. Volume[ml] Subdivision[ml] Error Limit[+/- ml] PP/PMP graduated cylinders 10 0,2 0,20 500 5 4,0 25 0,5 0,34 1000 10 6,0 50 1 0,50 2000 20 12,0 100 1 1,0 4000 50 29,0 250 2 2,0 Economic PP/PMP graduated cylinders 10 0,2 - 25 0,5 - 500 5 - 50 1 - 1000 10 - 100 1 - Vitlab are available in various configurations. The materials used for production are PP, PMP and SAN. Detailed information about graduated cylinders manufactured from the corresponding materials can be found in the following. PP Graduated Cylinders Witlab's graduated cylinders made from PP are highly transparent and adjusted to "in". The error limit meets the requirements of class B according to DIN 12681 and ISO 6706. Thereby thermal load up to a max, temperature of 80 °C are possible without causing permanently exceeded error limits. It is distinguished between graduated cylinders with a lead ones with a raised graduation. Wolume[ml] Subdivision[ml] Error Limit[+/-Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, PP, class B, small shape, raised grad. 25 0,50 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 142 500 1,0 1,0 145 250 2,0 2,0 315 25 0,50 0,50 170 500 5,0 5,0 360 50 1,0 1,0 200 1000 10 10 440 100 1,0 250 2000 20 482 PMP Graduated Cylinders PMP graduated cylinders PMP graduated cylinders of Vitlab are crystal-clear and compliant certified. There are two different variant available, with raised grad. or with imprinted red grad. The cylinders are adjusted to "in". The batch certificate, which is part of the delivery, contains a batch number and the actual determined nominal volume under specification of the test conditions. The resulting deviations from the nominal volume under specification of the test conditions. The resulting deviations from the nominal volume under specification of the test conditions. certificate. Vitlabs graduated cylinders are delivered with a hexagonal pedestial to increase stability. Thermal load up to 121 °C will not cause any permanently exceeded error limits. Nevertheless for PMP graduated cylinders with imprinted grad. Cleaning at max. 60 °C are recommended to save the grad. Therefore, for frequently autoclaving we recommend a graduated cylinder with a raised grad. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] From Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] From Limit[+/- ml] He exceeded error limits. The graduation of these products is raised. It is distinguished between SAN graduated cylinders with a hexagonal pedestial with nubs. Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Volume[ml] Subdivision[ml] Error Limit[+/- ml] Height[mm] Graduated cylinders, SAN, class B, small shape, raised grad. 25 0,5 0,5 122 250 5,0 5,0 192 50 1,0 1,0 142 500 10 10 218 100 2,0 2,0 163 1000 20 20 285 Here you can go back to the products.

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