



KAVALIER

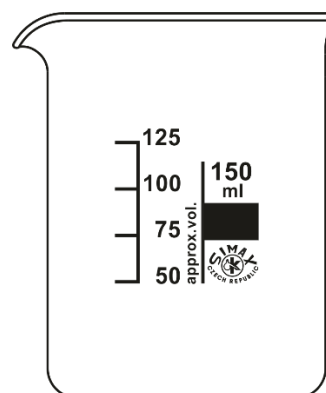
DECLARATION OF COMPLIANCE

Issuer's name/ producer: **KAVALIERGLASS, a.s.**
 Issuer's address/Producer: **Křížová 1018/6, Prague 5**
office: Sklářská 359, 285 06 Sázava, Czech Republic

Object of the declaration: **BEAKERS, low form, with spout**

<u>Catalogue Nr.</u>	<u>Product IDN</u>	<u>Capacity/ ml</u>	<u>d [mm]</u>	<u>h [mm]</u>
155	1632411010005	5	22	30
	1632411010010	10	26	35
	1632411010025	25	34	50
	1632411010050	50	42	60
	1632417010100	100	50	70
	1632417010150	150	60	80
	1632417010250	250	70	95
	1632417010400	400	80	110
	1632417010600	600	90	125
	1632417010800	800	100	135
	1632417010940	1000	105	145
	1632417010950	2000	130	185
	1632417010952	3000	150	210
	1632411010956	5000	170	270
	1632411010966	10000	217	350
	1632411010968	20000	285	430

Scheme of the glass item



Material specification:		
Beaker	clear	Borosilicate glass SIMAX®
Print	white	in fired-on, chemically resistant ceramic enamel
Purpose of use	laboratory glassware	

The object of the certificate described above is in conformity with the requirements of the following standards and regulations:

Glass characteristics:

- ISO 3585 Borosilicate glass 3.3 – Properties
 - Chemical durability (art. 4.1, 4.2, 4.3, 4.4)
 - Physical properties (art. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6)
- Glass containers for pharmaceutical use
 - Eur. Ph 10th Edition -3.2.1 Glass Type I.
- ISO 3819:2020 - Laboratory glassware — Beakers
 - Maximum permissible errors in dimensions fulfill the values specified in Table 1 - ISO 3819:2020

Table 1 – ISO 3819:2020

Dimensions of low form beakers		
Nominal capacity [ml]	External diameter [mm] ± 5%	Overall height [mm] max.
<u>5</u>	<u>22</u>	<u>32</u>
<u>10</u>	<u>26</u>	<u>37</u>
<u>25</u>	<u>34</u>	<u>52</u>
<u>50</u>	<u>42</u>	<u>62</u>
<u>100</u>	<u>50</u>	<u>72</u>
<u>150</u>	<u>60</u>	<u>82</u>
<u>250</u>	<u>70</u>	<u>97</u>
<u>400</u>	<u>80</u>	<u>113</u>
<u>500</u>	<u>85</u>	<u>118</u>
<u>600</u>	<u>90</u>	<u>128</u>
<u>800</u>	<u>100</u>	<u>138</u>
<u>1000</u>	<u>105</u>	<u>148</u>
<u>2000</u>	<u>130</u>	<u>188</u>
<u>3000</u>	<u>150</u>	<u>214</u>
<u>5000</u>	<u>170</u>	<u>274</u>
<u>10000</u>	<u>220</u>	<u>360</u>

No heavy metals (lead, cadmium, mercury and hexavalent chromium):

- Regulation (EC) No. 987/2008 of 8 October 2008 amending Regulation (EC) No. 1907/2006 – REACH as regards Annexes IV and V – glass was exempted from the obligation to register.

Characteristics of Borosilicate glass SIMAX®

- **Acid resistance** Class I. ISO 1776
- **Hydrolytic resistance** Class I. HGB1 to ISO 719;
HGA1 to ISO 720
- **Alkali resistance** Class II. ISO 695
- **Coefficient of mean linear thermal expansion α : $3,3 \times 10^{-6} \text{ K}^{-1}$** ISO 7991; (20/300 °C)

- **Pharmaceutical use**

	<i>European Pharmacopoeia (EP)</i>	<i>US Pharmacopoeia (USP)</i>	<i>Japanese Pharmacopoeia (JP)</i>
Glass	Eur. Ph.10 th – 3.2.1	USP <660>	JP16

Supporting data:

TEST / European Pharmacopoeia 10, Art. 3.2.1	UNIT	LIMIT	RESULT
Hydrolytic resistance - inner surfaces, test A	ml 0,01 mol/l HCl/100ml of leachate	max 0,40	0,04
Hydrolytic resistance - glass grains, test B	mol 0,02/l HCl/g	max 0,1	0,038
Arsenic content	µg As/g	max 0,1	< 0,001

- **Chemical characteristics of borosilicate glass (approximate values)**

Component	Content (percentage by weight)
SiO ₂	80,3%
B ₂ O ₃	13,0%
Al ₂ O ₃	2,4%
Na ₂ O + K ₂ O	4,3%

Additional information:

The producer confirms hereby that the characteristics, measures and accuracy of the products listed above are in full conformity with the provisions of the standard.

The producer also declares that the products are safe when used in usual and proper way.

The producer has installed the Quality Assurance System according to ISO 9001 and thus guarantees that all products delivered to the market are in full conformity with the technical documentation and with all fundamental requirements to such products.

Certificate No. 04 100 940602 issued by TÜV CERT, Certification Body at TÜV NORD CERT GmbH.

The certificate is issued for the customer: -

Sázava, 08. 06. 2021
Place and date of issue

Ing. Kristýna Machová
Project Quality Engineer

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