



Technical data sheet for Dewar carrying flask for biological samples type series 27 - 29 BE-Bio



27BE-Bio-V1

For storage in LN2
of 2ml ampoule / vials



27BE-Bio-V2

For storage in LN2
of 2ml ampoule / vials



27BE-Bio-V3

For gas phase dry storage
of 2ml ampoule / vials



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Area of application

- laboratory technique
- medical technique
- biotechnology
- storage and short internal transport of short-distances
- pressureless space for coolants

Features of performance

- reliably and economically
- Dewar flasks according to DIN EN ISO 16496
- glass material according to ISO 3585
- nominal capacity from 2 to 4 litres
- protective casing out of stainless steel
- V1 and V2 for LN2 storage
- V3 for gas phase storage

Description of complete flasks

Types and accessories

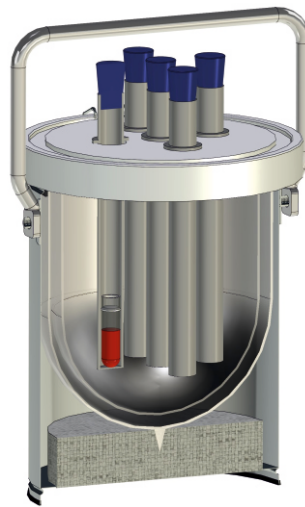
- B-E = protective casing out of stainless steel
- carrying handle = pure aluminium
- lid = polyethylene, white
- clamps = stainless steel, electrolytic polished

Temperature ranges

- glass refill from - 200°C to + 150°C,
- lid made of polyethylene
- Storage of samples at up to -196 ° C

Pressure range

- pressureless



27 BE-Bio-V3



27 BE-Bio-V2

Description of glass Dewar flask

Material

- borosilicate glass 3.3 according to ISO 3585

Chemical characteristics

- hydrolytic resistance: according to ISO 719 (98°C)
- hydrolytic resistance: according to ISO 720 (121°C)
- acid resistance: according to ISO 1776
- alkaline resistance: according to ISO 695-A2

Physical characteristics

- linear expansion coefficient: $3,3 \times 10^{-6} 1/K$
(in between 20-300°C)
- density: $2,23 \text{ g/cm}^3$
- specific thermal capacity: 910 J/kg K
- transformation temperature: 525°C

Vacuum

- $> 5 \times 10^{-6} \text{ mbar}$

Silvering

- fully silvered



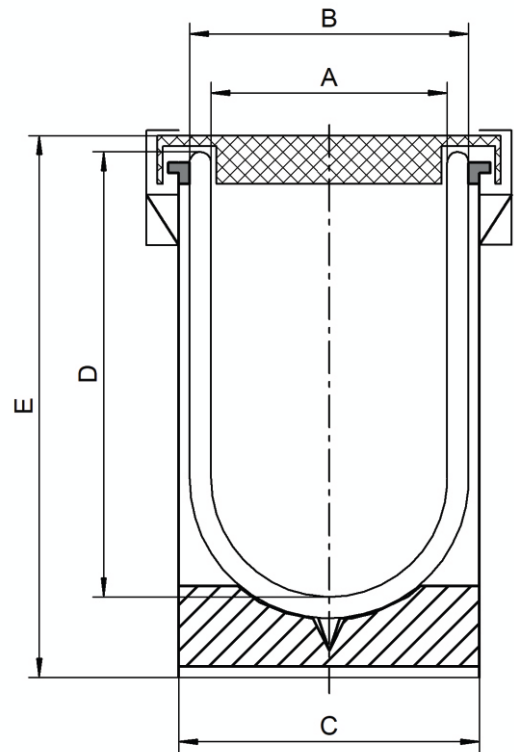
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Special types

- Version V1 with bore hole in the lid for N₂ gas outlet
- Small insulation flasks with silicone sealed lid
- Storage of 1-20 ampoule / vials (2ml) depending on the type
- Storage of the samples in LN₂ or indirectly in protective tubes (= gas phase storage)
- Other ampoule sizes on request

Safety advises and regulations

- always wear protective glasses and protective gloves
- national regulations for laboratories
- company- internal regulations
- safety regulations for handling with liquid gases
- ADR regulations
- carry oxygen measuring device if necessary



Measurements, technical specifications and article numbers

Type	Number of 2 ml vials	max. content ca. [L]	A mm	B mm	C mm	D mm	E mm	Weight ca. [kg]	Holding time LN ₂ with holder ca. [h]	Evaporation rate LN ₂ ca. [L / d]
27BE-Bio-V1	4	2	138	160	170	170	245	2,3	14	3,13
28BE-Bio-V1	8	3	138	160	170	230	305	2,8	22	2,18
29BE-Bio-V1	12	4	138	160	170	310	385	3,3	37	2,14
27BE-Bio-V2	5	2	138	160	170	170	245	2,3	14	3,13
28BE-Bio-V2	10	3	138	160	170	230	305	2,8	22	2,18
29BE-Bio-V2	15	4	138	160	170	310	385	3,3	37	2,14
27BE-Bio-V3	5	2	138	160	170	170	245	2,3	12	3,25
28BE-Bio-V3	10	3	138	160	170	230	305	2,8	20	3,06
29BE-Bio-V3	15	4	138	160	170	310	385	3,3	33	2,71

Article numbers

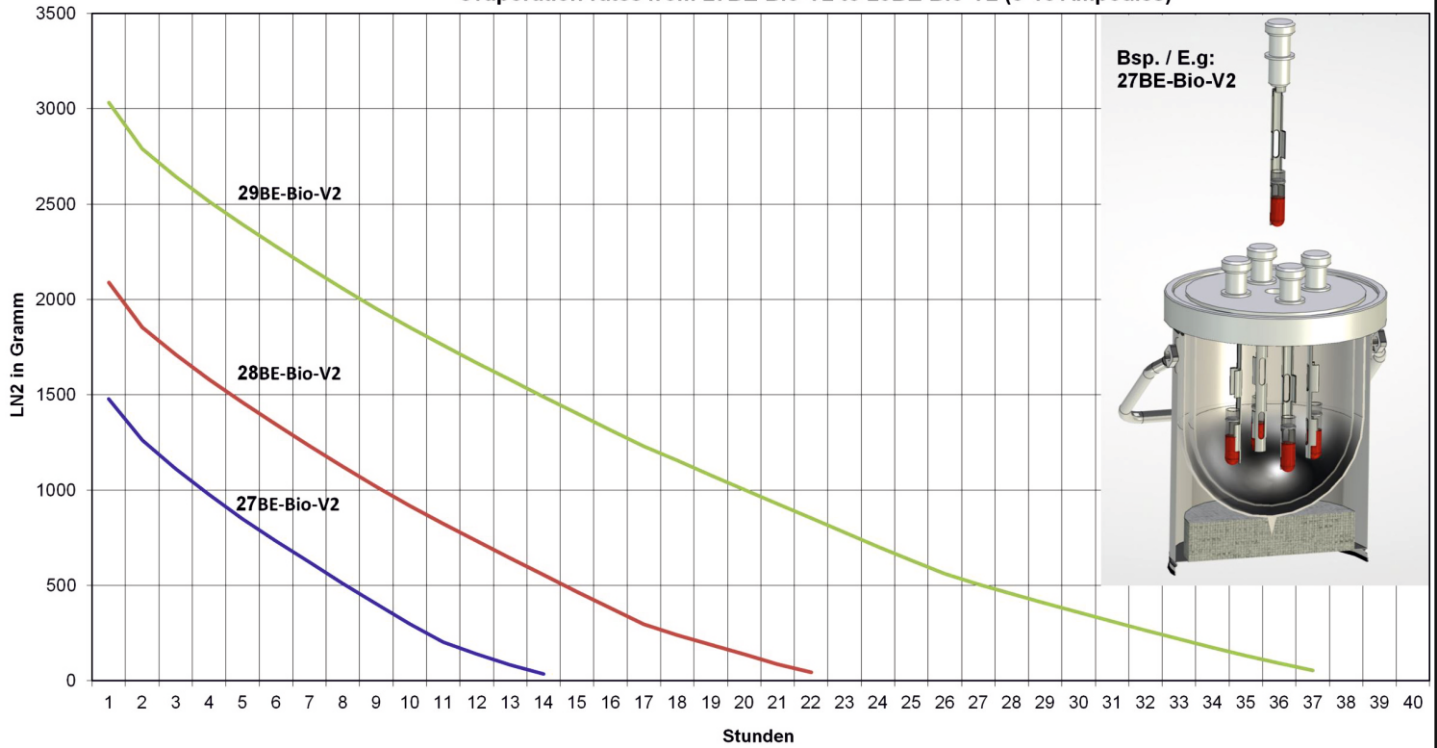
Type	Article No.
27BE-Bio-V1	1222-V1
28BE-Bio-V1	1223-V1
29BE-Bio-V1	1224-V1
27BE-Bio-V2	1222-V2
28BE-Bio-V2	1223-V2
29BE-Bio-V2	1224-V2
27BE-Bio-V3	1222-V3
28BE-Bio-V3	1223-V3
29BE-Bio-V3	1224-V3

Glass Refill	Article No.
27 A	1202
28 A	1203
29 A	1204

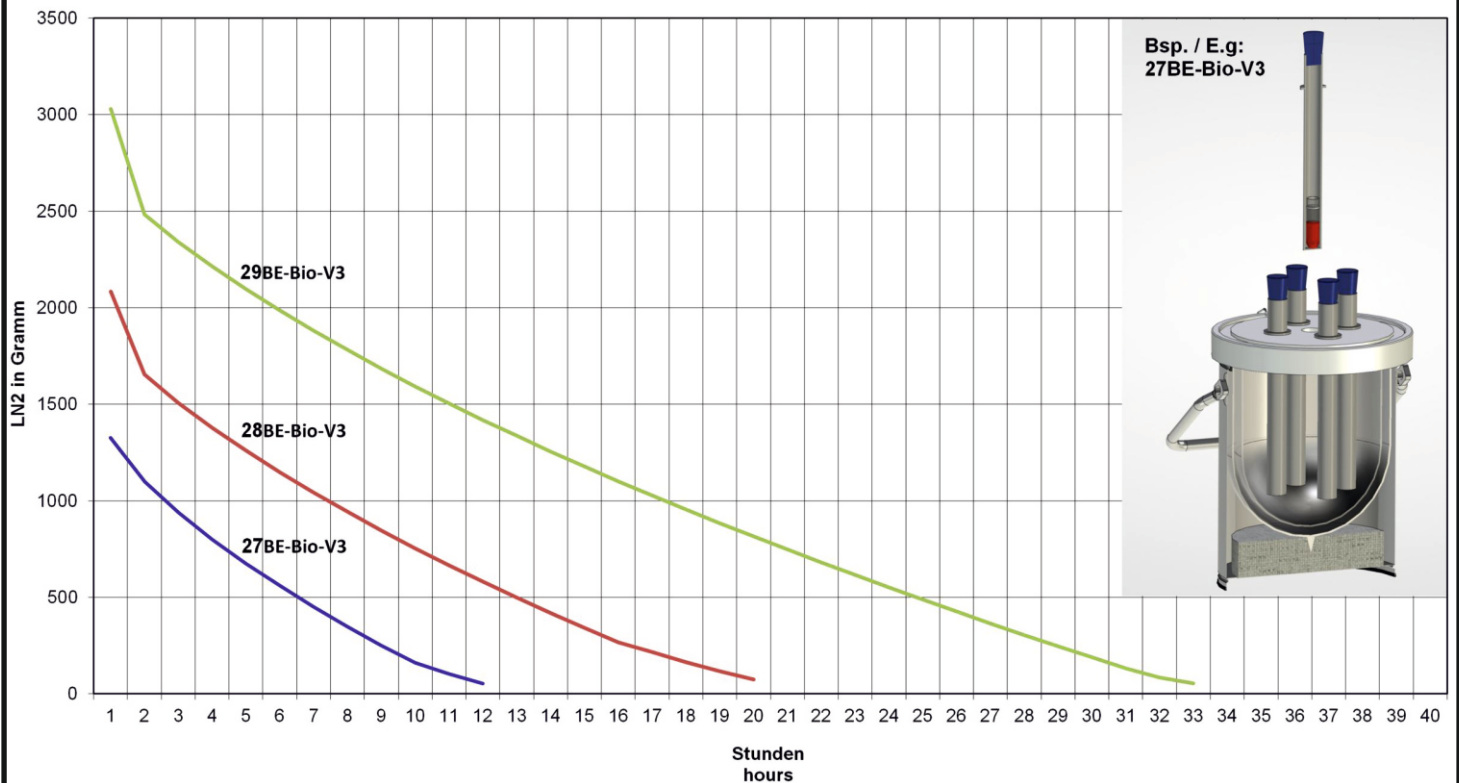
Vials are not included with the lid.
Needs to be ordered separately
Article No. 2652 = 100 pcs. 2ml vials.

Technisches Datenblatt zu Transportgefäße für biologische Proben der Typenreihe 27 bis 29 BE-Bio

Verdampfungsraten von 27BE-Bio-V2 bis 29BE-Bio-V2 (5 -15 Ampullen)
evaporation rates from 27BE-Bio-V2 to 29BE-Bio-V2 (5-15 Ampoules)



Verdampfungsraten von 27BE-Bio-V3 bis 29BE-Bio-V3 (5 -15 Ampullen)
evaporation rates from 27BE-Bio-V3 to 29BE-Bio-V3 (5-15 Ampoules)

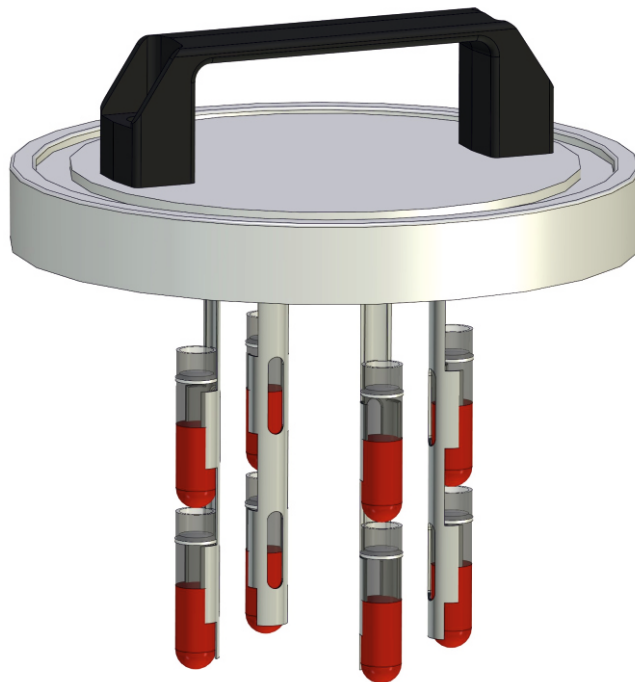




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Accessories and spare parts for version V1

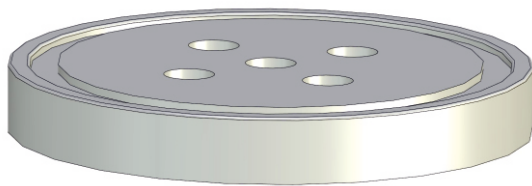
Replacement lid with handle and 4 vials holders for LN2 storage
of the 2 ml vials



Vials are not included with the lid.
Needs to be ordered separately
Article No. 2652 = 100 pcs. 2ml vials.

Dewar	2ml vials	Article No.
Typ 27	8	1933-11
Typ 28	12	1933-12
Typ 29	16	1933-13

Accessories and spare parts for version V2



PE replacement lid
with 5 holes
KGW No.:1933-20



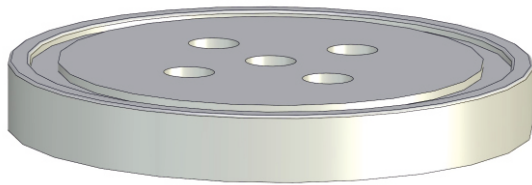
PE blind plug
KGW No.:1933-1



PE plug with holder
for 2ml ampoules
see table

Dewar	PE plug with vials holder Article No.	2 ml vials per vials holder	Length of vials holder
Typ 27	1933-21	2	125 mm
Typ 28	1933-22	3	175 mm
Typ 29	1933-23	4	225 mm

Accessories and spare parts for version V3



PE replacement lid
with 5 holes
KGW No.:1933-20



Replacement silicone plug
KGW No.:1933-35



Vials tube V2A
with silicone plug
KGW No.:1933-3

Dewar	Vials tube with silicone stopper Article No.	Number of 2 ml vials per tube	Length of vials holder to support ring
Typ 27	1933-31	2	150 mm
Typ 28	1933-32	3	200 mm
Typ 29	1933-33	4	250 mm



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Customized vials holder and lid

We are happy to design and manufacture your vials holder according to
your own specifications.

Send your request to: info@kgw-isotherm.de

