

## the perfect preservation for watersoluble samples

these days, cooking is trendy and is celebrated on TV daily from Jamie Oliver and Tim Mälzer to Johann Lafer and Alfred Biolek. Now you can even compare your own cooking abilities with 4 other cooks in "Perfect Dinner". On the other hand, the classical family structures break up, women have their first child later, single households and patchwork families become the norm. The needs of modern society seem to be contrary to the celebration of cooking, as fast food and instant coffee dominate our daily life and instead of the "perfect dinner" on the table, we often eat frozen pizza on the sofa while watching the „perfect dinner“ on TV..

One of the stories of instant products started in Brasil in 1930. The coffee harvest was so plentiful that the Brazilian government asked Nestlé to develop a process to preserve coffee in order to use up the coffee surplus. The first instant coffee was sold in Switzerland on 1. April 1938. The process applied was freeze drying or Lyophilisation which means the solvent is frozen and in a second step the water is sublimated applying a vacuum. This process is very gentle and preserves the flavours. The same process is used for the lyophilisation of pharmaceuticals in order to improve the stability of the active agents and to increase their shelf life.

For Lyophilisation, the product is filled into screw or crimp vial which is closed with a butyl rubber stopper. The classic freeze

dry stopper has a couple of ribs and the stopper is put on partially so that the liquid can escape through a channel. When the drying is completed, the stopper is pushed completely into the vial which then is sealed. Butyl rubber is used as the diffusion of water through the rubber is minimal and butyl rubber is not corroded by the freeze dried product. If the vials are used for water based solvents an injection stopper is used which if needed can also be supplied with a PTFE cover for a better resistance to aggressive solvents.

As producer, especially of small to medium sized quantities, we can also produce products according to your needs so that you always have the perfect container for your products.

[http://en.wikipedia.org/wiki/TV\\_Cooking\\_show](http://en.wikipedia.org/wiki/TV_Cooking_show)  
<http://en.wikipedia.org/wiki/Nescafé>  
[http://en.wikipedia.org/wiki/Freeze\\_drying](http://en.wikipedia.org/wiki/Freeze_drying)  
[http://www.infochroma.ch/eng/lio\\_vial/index.html](http://www.infochroma.ch/eng/lio_vial/index.html)



## Lyophilisation Crimp Vial with 13 mm Crimp Neck



### 8082-05-D

5 ml lyophilisation crimp vial  
with 13 mm crimp neck  
amber borosilicate glass  
size 16 x 50 mm

EUR 83.00/Pack of 387 pcs.



### 8083-TO

13 mm aluminium crimp cap  
with fully tear of seal

EUR 6.50/100 pcs.



### 8083-Lio

13 mm freeze dry stopper  
grey butyl rubber

EUR 18.70/100 pcs.



### 8083-Bu

13 mm injection stopper, grey butyl rubber

EUR 13.20/100 pcs.

## Lyophilisation Screw Vial with 22 mm Screw Thread



### 8084-25-D

25 ml lyophilisation  
screw vial with 22 mm  
screw thread  
amber borosilicate glass  
size 32 x 36 mm

EUR 92.00/Pack of 99 pcs.



### 8084-CR/22-Lio

22 mm screw cap, red polypropylene  
goes with freeze dry stopper 8087-Lio

EUR 17.50/100 pcs.



### 8087-Lio

20 mm freeze dry stopper,  
grey butyl rubber

EUR 19.90/100 pcs.

*Price valid for a quantity of 1 Pack or 500 pcs respectively, quantity breaks from 1000 pcs.; all prices net, excl. VAT, excl. postage and packaging EUR 10.00. Prices subject to change without notice.*



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# ILMAC

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