

## va-Q-genic liquid nitrogen charging instruction

For va-Q-genic 2, 15, 20

The following charging instruction is valid for: **va-Q-genic 2, 15, 20**. Figures show exemplarily the va-Q-genic 15.

### Note

**This product shall be stored and transported in upright position!**

You must at all times ensure to meet the safety instructions provided by the supplier of the dry shipper. These are made available under this [URL<sup>1</sup>](#) in chapter 2.



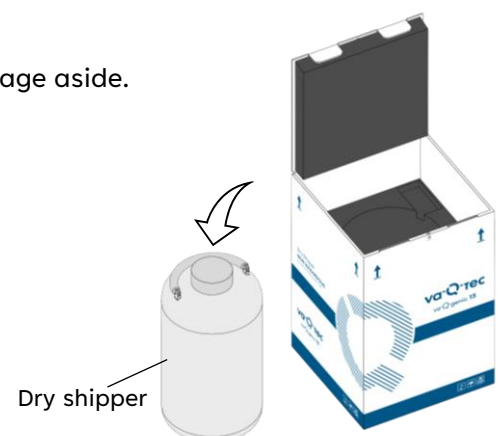
### Step I

Open the top flap of the outer package of the va-Q-genic.



### Step II

Remove the dry shipper from outer package and set the outer package aside.



<sup>1</sup> [https://www.cryopal.com/sites/cryopal/files/2017/10/27/nh78449\\_en\\_mu\\_voyageur\\_rev\\_a\\_11-2016.pdf](https://www.cryopal.com/sites/cryopal/files/2017/10/27/nh78449_en_mu_voyageur_rev_a_11-2016.pdf)  
Charging instruction va-Q-genic

### Step III

Liquid nitrogen should be handled by trained personnel only. Put on personal safety equipment when dealing with liquid nitrogen. Use oxygen meter if needed.



It is essential to use the approved individual protective equipment such as gloves, protective clothing, goggles, etc.



Beware of the temperature of frozen products as well as the cold parts of the devices.



Be careful not to damage the neck when inserting or removing the device's racks or canisters.

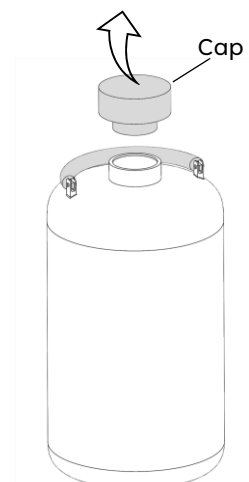
### Step IV

Note: The vacuum valve on the outside of the dry shipper must not be in contact with the liquid nitrogen during the filling process.



Vacuum valve

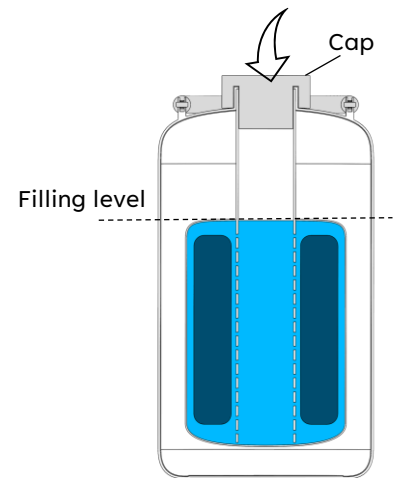
Remove cap. Fill in liquid nitrogen to the shown filling level. Use appropriate equipment for the filling process, e.g. a hose attached to a liquid nitrogen tank.



The following volume is considered as an indication for the required liquid nitrogen per dry shipper.

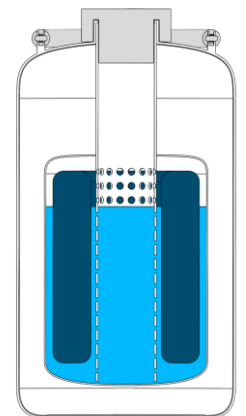
	va-Q-genic 2	va-Q-genic 15	va-Q-genic 20
Volume in litre	10.0	20.0	30.0

Put cap back on. Please note that it can occur that the cap is floating on the liquid nitrogen and is not unusual. Do not push the cap in that case.



### Step V

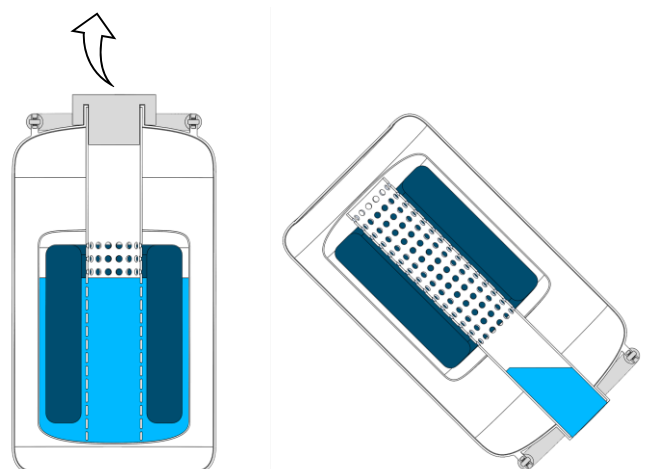
Wait at least 9 hours and maximum 48 hours for the porous material to absorb the liquid nitrogen.



### Step VI

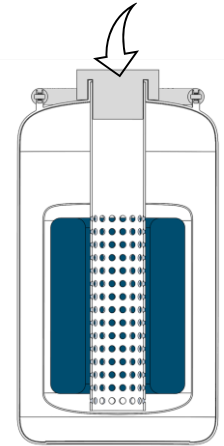
Note: The vacuum valve on the outside of the dry shipper must not be in contact with the liquid nitrogen during the disposing process.

Remove cap, dispose the excess liquid nitrogen by tilting the va-Q-gec.



## Step VII

Put the cap back on.



## Step VIII

Weigh the dry shipper. The target weights to reach are shown in the table below. Take care to follow the proper weighing details shown in the table below. The charging process is finished.

	va-Q-genic 2	va-Q-genic 15	va-Q-genic 20
<i>Inclusive</i>	<ul style="list-style-type: none"> <li>• Cap</li> <li>• Canister</li> <li>• Carrying Strap</li> </ul>	<ul style="list-style-type: none"> <li>• Cap</li> <li>• Canister</li> </ul>	<ul style="list-style-type: none"> <li>• Cap</li> </ul>
<i>Exclusive</i>	<ul style="list-style-type: none"> <li>• Datalogger<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Datalogger<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Datalogger<sup>2</sup></li> <li>• Rack</li> </ul>
<i>Target weight (kg)</i>	3.7 ± 0.1	20.6 ± 0.9	19.9 ± 0.6
<i>Target weight (lbs)</i>	8.1 ± 0.2	45.4 ± 2.0	43.9 ± 1.3

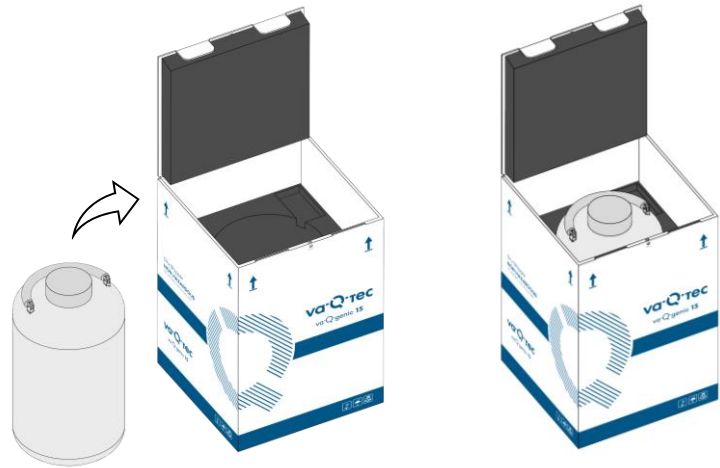


<sup>2</sup> Datalogger = Sensor + Logger  
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## Step IX

Put the dry shipper back into the outer package.

You can use the va-Q-genic now for loading the product. The loading procedure is described in the corresponding **va-Q-genic handling instruction**.



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