

Charge rates for trials on laboratory dryers of Merk Process

Charge-rate per day includes the following services:

- 1 day at 8 hours work
- use of the laboratory dryer and accessories at Merk Process
- drying tests by process engineer and laboratory personnel
- Costs for water and energy
- process report and evaluation of the results by process engineer with csv-file data export, photos, videos

daily rate **EUR 1.890.—**

- plant preparation, cleaning and disinfection by laboratory personnel

one time for products containing organic solvents **EUR 900.—**
one time for products containing water as solvent **EUR 240.—**

- additional materials and shipping costs

one time **on actual costs**

In the case that a process plant is ordered on the bases of performed trials with our laboratory dryers the costs for the tests will be credited.

Currently available Multi-function-drying-plant :

Operating data:

Generation of vacuum - dryer:	Roots vacuum booster backed by a rotary vane pump
Generation of vacuum - discharge:	Rotary vane pump
Working pressure:	0,5 – 50 mbar abs
Chiller for glass-condenser:	-45 °C – +110 °C (-58 °F – +230 °F)
Drying surface:	0,25 m ² on 4 zones with belt width of 250 mm
Temperature zone 1-3:	+20 °C – +150 °C (+68 °F – +302 °F) with thermo-oil
Temperature zone 4:	+10 °C – +90 °C (+50 °F – +194 °F) with water
Infrared heating:	300 °C
Temperature feeding:	+20 °C – +95 °C (+68 °F – +203 °F) with water
Magnetron-power:	2 x 850 W

Operation modes:

Vacuum-drying with contact-heating:	Batch- and continuous drying of granule products Batch- and continuous drying of liquid products
Infrared heating:	Batch- and continuous drying of granule products Batch- and continuous drying of liquid products
Vacuum-drying with microwave:	Batch- and continuous drying of granule products Batch- and continuous drying of liquid products
Combination-drying:	Batch- and continuous drying of granule products Batch- and continuous drying of liquid products
Freeze-drying:	Batch- and continuous drying of granule products Batch- and continuous drying of liquid products

Additional equipment:

- 1 x PC-control for handling and protocol
- 1 x IR-radiation product temperature measuring
- 1 x Feeding with excentric-, membrane - and peristaltic pump
- 1 x Evaporator Heidolph Laborota 4000 e (3L)
- 1 x Agitator with stative and visco jet Heidolph RZR 2102
- 1 x Precision scale Kern NKE 4000 easy mix
- 1 x Microwave oven with convective heater and infrared heating 900/1900/1650 W up to 200°C (392°F)
- 1 x Moisture content measuring with Sartorius MA 50
- 1 x Refractometer Krüss DR-201-25
- 1 x Shock-freezer -25°C (-13°F)
- 1 x Fridge/freezer
- 1 x Room venting with in-and outlet fan
- 1 x Air conditioning
- Miscellaneous test- and measuring tools

Please note:

Additional costs for product analysis will be charged separately. We need a precise description of transport, handling etc. of the products. Products send to Merk Process need to have added a safety data sheet. The handling of toxic or explosive products needs to be checked by Merk Process and can be refused at any time. The responsibility for the shipment of raw materials, products, samples, dry products carries the customer. The customer has to take back rest material on his costs or Merk process will ship it back.