

PHARMASD™, PSD

Plant configuration

- Main components: Chamber, cyclone, bag filter, HEPA-filters, condenser, electrical heaters
- Nitrogen as drying gas
- Closed-cycle loop
- Powder collection under cyclone. Bag filter for collecting fines
- Atomization methods:
 - Pressure nozzle, co-current
 - Two-fluid nozzle, co-current

Feed

- Mixing of various solvents possible
- Dosing and mixing of various raw materials possible
- Filtration of feed possible

Solvents

- Water
- Ethanol
- Methanol
- Isopropyl alcohol
- Acetone
- Methylene chloride
- Ethyl acetate

Operating parameters

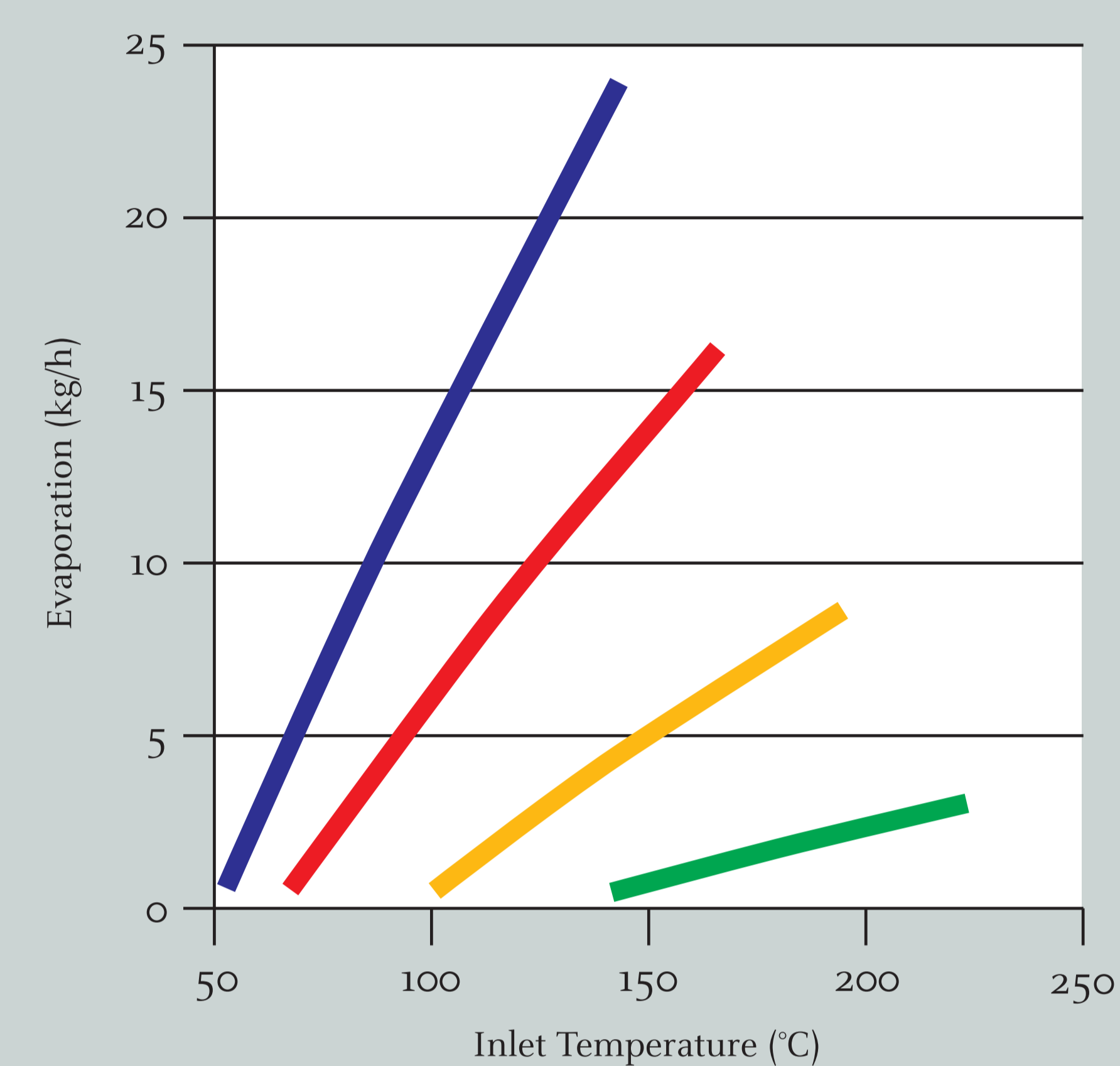
| | |
|---|-------------------|
| Inlet temperature | up to 220 °C |
| Outlet temperature | up to 150 °C |
| Condenser temperature | down to -18 °C |
| Feed temperature | 5 °C to 80 °C |
| Pressure nozzle, atomization pressure | 10 bar to 100 bar |
| Two-fluid nozzle, gas pressure | 0,5 bar to 14 bar |
| Two-fluid nozzle, atomization gas temperature | 18 °C to 100 °C |

CIP

- CIP liquid temperature: Up to 80 °C

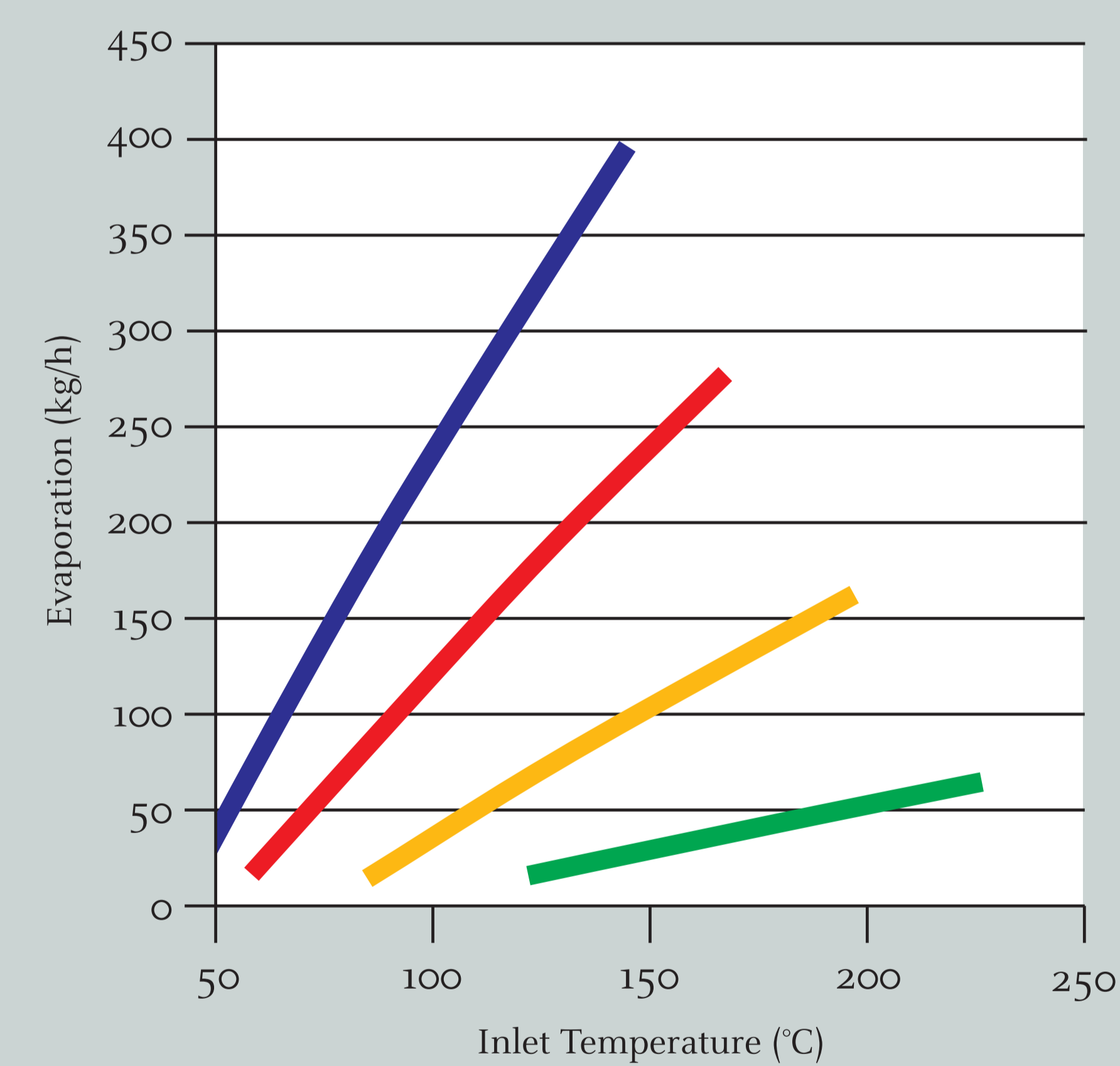
PSD-1 co-current atomization

Nominal drying gas rate: 80 kg/h



PSD-4 co-current atomization

Nominal drying gas rate: 1250 kg/h



- Methylene Chloride Evaporation Rate at Outlet Gas Temperature 40 °C
- Acetone Evaporation Rate at Outlet Gas Temperature 50 °C
- Ethanol Evaporation Rate at Outlet Gas Temperature 70 °C
- Water Evaporation Rate at Outlet Gas Temperature 90 °C