



# CryoTune

## Maintenance concept for systems with liquid nitrogen

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We reserve the rights for this elaboration according to DIN ISO 16016. Any depicted design corresponds to the current state of technology. Alterations to this embodiment will void validity.

**Description** GMP/GLP-compliant maintenance concept for the operation of liquid nitrogen systems, which are designed for the specific customer requirements and according to the MedizinprodukteBetriebsverordnung (MPBetreibV). All maintenance work includes the documentation required for the proof of GMP/GLP-compliant storage of biological material under nitrogen cold.



- Procedure**
- Visual inspection and external cleaning of containers
  - Leak test on connections and pipe fittings
  - Visual and functional testing of sensors
  - Calibration of the temperature sensors with calibration certificate
  - Inspection and replacement of necessary wear parts such as lid hinges, hand valves, solenoid valves, safety valves, seals and connection fittings
  - De-icing of containers and internal cleaning
  - Maintenance of the air monitoring system
  - Maintenance of the nitrogen supply system

The test results and the results of the functional tests are documented in detailed checklists and protocols.

- Options**
- Execution of OQ tests according to customers validation documents
  - Complete tank revision and re-commissioning
  - Organization of pressure vessel tests
  - Post-evacuation of containers