

BITO PHARMABOX

Quick guide to preconditioning PCM batteries (phase change material)

Cold pack for +25°C = Cold pack green
Cold pack for +08°C = Cold pack blue
Cold pack for -25°C = Cold pack white





- For preconditioning, PCM batteries are cooled below their freezing point.
- To do this, place the PCMs in commercially available freezers or special pharmaceutical refrigerators.
- **Note:** The lower the temperature, the less preparation time is required.

Recommendations for preconditioning PCMs

Envisaged range of use	Cooling temperature	Duration in hours
2 to 8°C	0°C (+/- 2°C)	24 hours
-25 to -15°C	-35°C (+/- 5°C)	14 hours
15 to 25°C	4°C (+/- 5°C)	14 hours
15 to 25°C	18°C (+/- 2°C)	48 hours

„Pre-defrost“ PCM batteries before use

As soon as the first liquid droplets can be seen inside the battery, the battery is ready for use.

KEY DATA

PCM batteries meet the following criteria for safe transportation:

- Before use, make sure that the phase change temperature is within the desired range.
- PCM batteries are non-toxic and non-carcinogenic for humans and animals.
- They do not react with and do not act as a solvent for packaging materials.
- They can be disposed of in the conventional way (no hazardous waste).
- They are biodegradable.
- They are flame retardant (high flash point).
- They are non-corrosive.
- They are stable in the event of temperature changes (in particular no undercooling).
- Their volume deviates only slightly depending on the temperature.

MULTIPLE USE

- Please note that PCM operating durations differ depending on the transport box (see temperature profiles).
- Re-use batteries only when you are sure that they have been correctly preconditioned.
- Check the PCMs for external damage and soiling; clean the batteries and dispose of defective PCMs.

PLEASE NOTE

- When using PCM batteries below the freezing point, the batteries should be preconditioned in a liquid state close to the freezing point.
- A safe method would be to completely defrost a frozen battery until only a small amount of frozen material is left.
- Alternatively, store PCMs for at least 24 hours above, but close to, freezing point.