

## Enables detection of biomarkers in cancer research



### Why are phosphomarkers not used in routine diagnosis of cancer?

Due to its variable nature, reversible protein phosphorylations are sensitive to changes in the tissue environment, *e.g.* sampling and subsequent anoxia. Kinases and phosphatases react rapidly by altering the state of phosphorylation in response to external stimuli.

The interest in phosphorylations has increased over the last years, depending on that this modification is the function setter of many proteins and that phosphorylations play an important role in cell signalling and signal transduction. Their detection and measurement are crucial to bring new insights to the origin of diseases like cancer and development of new drug targets.

### Superior sample preservation ensures the quality and validity of your analytical results

Heat stabilization is a revolutionary sample preservation technique that stops biological change immediately and permanently. It enables accurate analysis and quantification of unstable biomarkers such as phosphorylations, endogenous peptides and small molecules. Using heat stabilization reduces technical errors associated with sampling and allows you to compare true biological variation.

The Stabilizer™ T1 is a portable, benchtop instrument that can be used for all tissue types, fresh or frozen, allowing you to stabilize and secure currently stored or biobanked samples.

- Preserves tissue biomarkers directly in the operating room
- Retains the molecular information from the moment of sampling throughout the entire analysis workflow
- Ensures quality and standardization of sample collection

### Phosphorylations can change and disappear already after minutes without stabilization

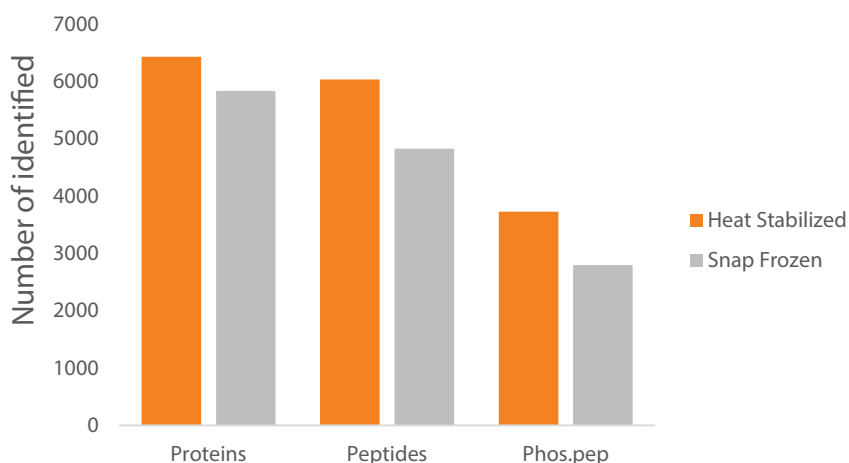


Fig 1. Biomarker search in human liver sample. Number of identified phospho-polypeptides in mass spectrometry experiment after  $\text{TiO}_2$  affinity enrichment of tryptic phospho-peptides.