

RNA extraction from breast cancer xenografts and lymph node metastases

Precellys® 24

LYSIS & HOMOGENIZATION AUTOMATED EQUIPMENT

in The Institute of Cancer Research



■ **Context :**

Within the context of The Institute of Cancer Research, *ex vivo* tumour tissues are being analysed to study the gene expression of breast tumours and their metastases. Breast cancer xenografts from different cell lines (MDA-MB-435 and GI-101), as well as their lymph node metastases, were frozen in liquid nitrogen after collection.

■ **Material :**

- Precellys® kit 03961CK14 of ceramic beads
- Tumours from breast cancer xenografts and lymph node metastases
- 600 µl of lysis buffer (RLT and β-mercaptoethanol)

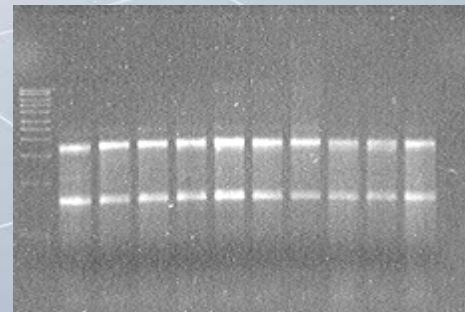
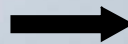
■ **Protocol / Parameters :**

1. add the frozen samples and the buffer in the Precellys kits
2. load the platform up to 24 tubes
3. set up the parameters :
 - time running: 20 sec
 - speed: 5500 rpm
 - number of cycles: 1

■ **Results in collaboration with The Institute of Cancer Research, McElwain Laboratories, Sutton (UK)**

- RNA extraction
- RNA gel : 0.5µg of total RNA diluted in 15µL of denaturing loading buffer (containing urea) denatured and run on a 1% agarose gel in 1 x TBE at 140V for 1h.

Number	Sample	Time	Number	Sample	Time
1	Primary tumours	10 sec	6	Primary tumours	20 sec
2		3 x 10 sec	7		20 sec
3		20 sec	8	Lymph node metastases	20 sec
4		20 sec	9		20 sec
5		20 sec	10		20 sec



1 2 3 4 5 6 7 8 9 10

■ **Conclusions :**

The Precellys kits allows a quick and effective homogenization of the xenograft tissues, and the total RNA extracted with an appropriate kit following tissue lysis with the Precellys kits is of good quality.