



RNA Extractions of Microorganisms

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CONTEXT

Within the context of research on genetic analysis, molecular biology brings rapid and reliable answers concerning an eventual pathogen germs contamination (identification and detection).

The sample preparation is an important step, which needs to be efficient without degrading the material, particularly DNA, RNA, or proteins.

MATERIALS

- Precellys®24
- Precellys® kit CK28 (big ceramic beads)
- Precellys® kit VK05 (small glass beads)
- Sample : E. Coli bacteria/ Bacillus Globugii spores in buffer.

PROTOCOL

- Precellys®24 parameters
6500rpm, 2x23 sec.

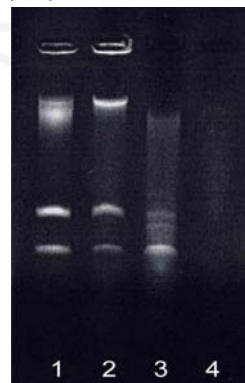


RESULTS

Results were conducted in collaboration with LGN (Laboratory of Molecular Genetic of the Neurotransmission).

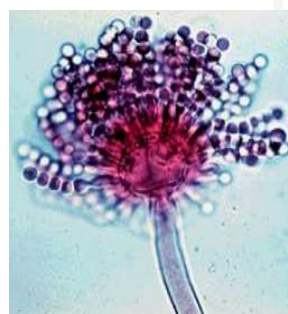
E.Coli and Spores BG bacteria were lysed with Precellys kit compared to standard procedures.

RNA extraction was performed from the 2 microorganisms following each sample preparation.

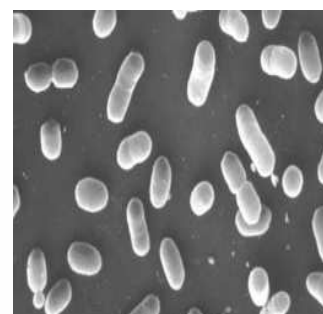


1. E.coli (Precellys)
2. E.Coli (standard)
3. Spores BG (Precellys)
4. Spores BG (Standard)

LGN Paris, April 2004 RNA extraction after lysis



Aspergillus



*Micro-organisms :
bacteria E. coli*

CONCLUSION

The Precellys®24 offers a sample preparation step more efficient on difficult micro-organisms than traditional procedures. The RNA was not denatured. Regarding operation, the Precellys®24 was also well appreciated as a cross contamination free system and for the time saved on sample preparation.