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Reference: 03712-900-LT037-A
Subject: Precellys®24 device in Biosafety Level 3 laboratory

Dear Sir, Madam

Precellys®24 has been designed to be used in biosafety L2+ or L3 laboratories. First Precellys® application in 2003 was for BSE detection. More than 500 units have been installed in BSE diagnosis through collaborations with Bio-Rad and Idexx companies. It can be used in laminar airflow cabinet.

Precellys®24 equipment is manufactured to guarantee the operators safety based on technical characteristics and alarms.

Technical features and safety:

- *Containment seal*: guarantee a tightness separation between the tubes operation area from the mechanical and electrical parts (inside the equipment). This allows also an easy decontamination step.

- *Lid and alarm*: The closing detection allows stopping the device if the lid opens during processing. The transparent lid allows having a visual observation of the processing area.

- *Engine safety and alarm*: the speed sensor included in the engine allows real-time speed monitoring. If an irregularity is measured the engine stops. This guarantees the reliability of the sample preparation.

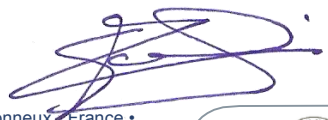
- *Pressure system and alarm*: Precellys®24 has an innovative tube blocking system based on a vacuum system that avoids any screwing step to hold the tubes.. This guarantees the operator safety.

Precellys®24 is also used for other pathogenic microorganisms. Herewith, a list of publications or application papers (available on www.precellys.com or upon request). Moreover, it is designed to respect directives detailed below.

If you require any further information, please contact us. We look forward to hearing from you.
Yours faithfully,

Stéphane Karoubi

Product Manager



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Precellys®24 is certified in accordance with below directives:

- The Machinery Directive 2006/42/EC
- The Low voltage Directive 2006/95/EC
- The EMC Directive 2004/108/EC
- The Directive 2002/95/EC relating to restriction of use of certain hazardous substances in electrical and electronic equipment
- The Directive 2002/96/EC relating to waste electrical and electronic equipment
- The standard FCC part 15 and part 18

Moreover, its design has been checked considering the standard:

- EN 61010-1, EN 61010-2-081 and EN 61010-2-101 according to the « Safety requirements for electrical equipment for measurement, control and laboratory use »
- CEI 60721-3-2 according to the « Classification of environmental conditions following the classification of groups of environmental parameters and their severities for the transportation »

Application notes:

03712-810-DU034_DNA_MycobacteriaCells_Biomed_CH

03712-810-DU053_Viability_bacteria_Biomed_AU

03712-810-DU033_RNA_ChikungunyaVirus_MacaquesTissues_Biomed_FR

03961-006-DU005_Prion Protein_Brain_Lymphoides_Biomed_FR

03961-002-DP016_Viral RNA_infected tissues_Biomed_BE

Publications:

SP026: The mycobacterial DNA-binding protein 1 (MDP1) from Mycobacterium bovis BCG influences various growth characteristics BMC Microbiology 2008, 8:91 doi:10.1186/1471-2180-8-91

SP079: Femtomolar Detection of the Anthrax Edema Factor in Human and Animal Plasma Anal. Chem., 2009, 81 (14), pp 5935–5941
DOI: 10.1021/ac900827s Publication Date (Web): June 12, 2009

SP082 : Improved tetracycline repressors for gene silencing in mycobacteria Nucleic Acids Research, 2009, 1–11
doi:10.1093/nar/gkp015Received November 17, 2008; Revised December 29, 2008; Accepted January 7, 2009

SP0157 Cholesterol utilization in mycobacteria is controlled by two TetR-type transcriptional regulators: kstR and kstR2 , Microbiology 0 (2010), mic.0.034538; DOI 10.1099/mic.0.034538 0
SP0169:Optimized DNA Preparation from Mycobacteria Cold Spring Harb Protoc; 2010; doi:10.1101/pdb.prot5408 Vol. 2010, Issue 4, April

SP0243: Regulation of the 18 kDa heat shock protein in Mycobacterium ulcerans: an alpha-crystallin orthologue that promotes biofilm formation DOI: 10.1111/j.1365-2958.2010.07401.x Molecular Microbiology

SP0256: Protein inactivation in mycobacteria by controlled proteolysis and its application to deplete the beta subunit of RNA polymerase
Nucleic Acids Research, 2010, 1–11 doi:10.1093/nar/gkq1149

SP330: Depletion of antibiotic targets has widely varying effects on growth Published online before print February 22, 2011, doi: 10.1073/pnas.1018301108
PNAS February 22, 2011

SP365 : Pathogen Quantitation in Complex Matrices: A Multi- Operator Comparison of DNA Extraction Methods with a Novel Assessment of PCR Inhibition, Pontiroli A, Travis ER, Sweeney FP, Porter D, Gaze WH, et al. (2011) Pathogen Quantitation in Complex Matrices: A Multi-Operator Comparison of DNA
Extraction Methods with a Novel Assessment of PCR Inhibition. PLoS ONE 6(3): e17916. doi:10.1371/journal.pone.0017916

SP375 : Diagnosis and Molecular Characterization of Mycobacterium avium subsp. paratuberculosis from Dairy Cows in Colombia SAGE-Hindawi Access to Research Veterinary Medicine International Volume 2011, Article ID 352561, 12 pages doi:10.4061/2011/352561

SP463 : 1H NMR-based Metabolomic Profiling in Mice Infected with Mycobacterium tuberculosis J. Proteome Res., 2011, 10 (5), pp 2238–2247
DOI: 10.1021/pr101054m Publication Date (Web): April 1, 2011

SP506 : Restriction enzyme analysis of the hsp65 gene in clinical isolates from patients suspected of having pulmonary tuberculosis in Teresina, Brazil
Análise de restrição enzimática do gene hsp65 de isolados clínicos de pacientes com suspeita de tuberculose pulmonar em Teresina, Piauí

SP511 : An Inter-Laboratory Validation of a Real Time PCR Assay to Measure Host Excretion of Bacterial Pathogens, Particularly of Mycobacterium bovis Travis ER, Gaze WH, Pontiroli A, Sweeney FP, Porter D, et al. (2011) An Inter-Laboratory Validation of a Real Time PCR Assay to Measure Host Excretion of
Bacterial Pathogens, Particularly of Mycobacterium bovis. PLoS ONE 6(11): e27369. doi:10.1371/journal.pone.0027369

SP063 : Direct Detection of Disease Associated Prions in Brain and Lymphoid Tissue Using Antibodies Recognizing the Extreme N Terminus of PrPC, Previously published online as a Prion E-publication: http://www.landesbioscience.com/journals/prion/article/4439

SP571 : Conserved properties of human and bovine prion strains on transmission to guinea pigs Laboratory Investigation 91, 1326-1336 (September 2011) | doi:10.1038/labinvest.2011.89