

Certificate of Origin and Analysis for BRUKER Quality Control Strains

We declare that the following DSMZ culture

DSM-No. Strain	Batch-No.	Risk Group
DSM 1103 <i>Escherichia coli</i>	Jan 2016	2

✓ is an authentic DSMZ culture derived directly from the strain held in the DSMZ

✓ has been produced in DSMZ laboratories at the address given below

✓ is of German preferential origin

✓ has been tested by DSMZ control procedures with respect to purity and identity

Viability

Viability of the above batch was tested by subculturing.

Purity

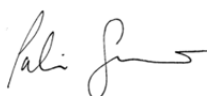
Purity of the above batch was checked after production. This check included microscopical and macroscopical observations and selected physiological, chemosystematic and molecular based tests.

Authenticity

Authenticity of the above batch was checked by the following techniques:

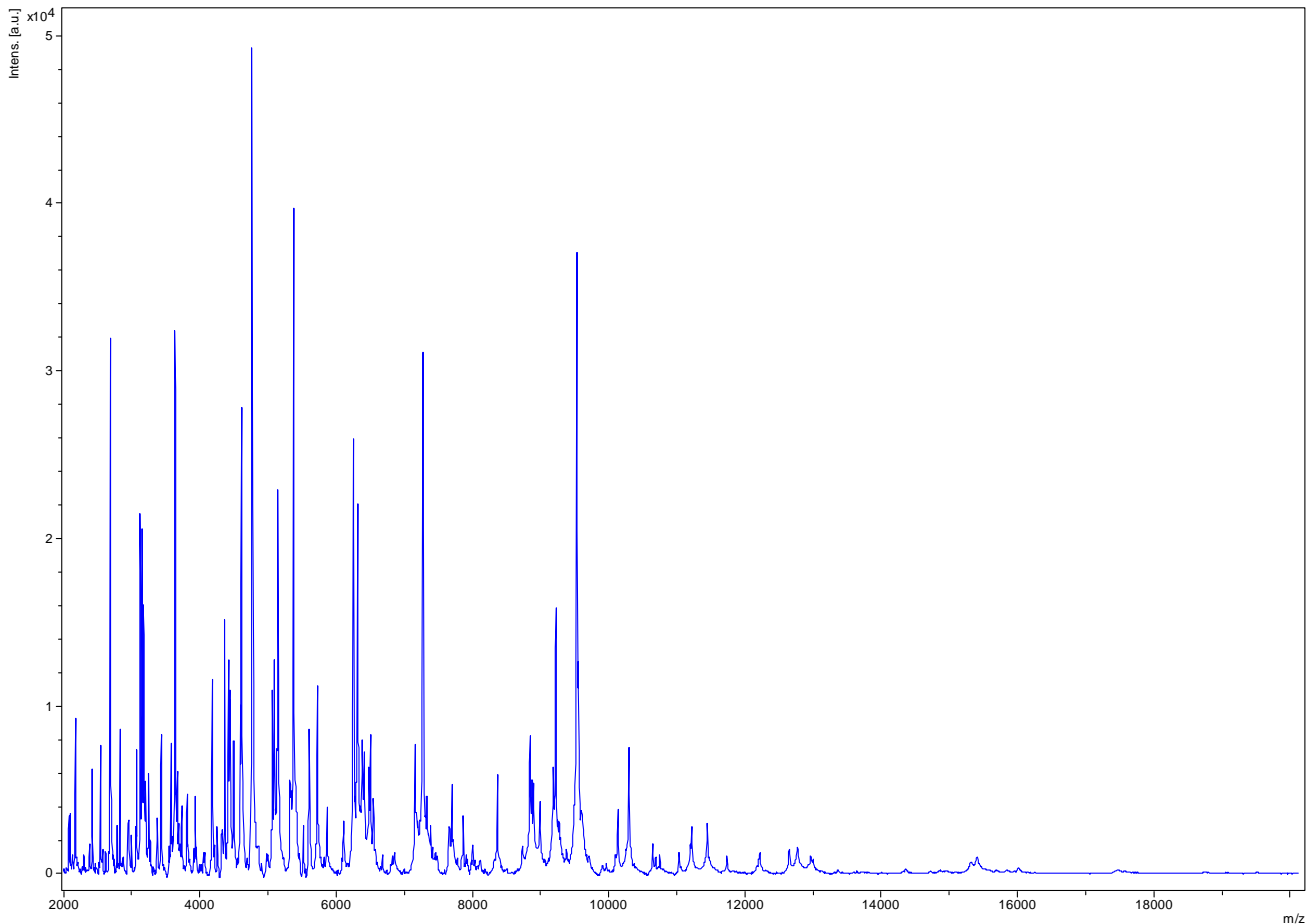
- API® (Analytical Profile Index)
- Whole cell fatty acid composition
- RiboPrinting® (molecular characterisation)
- MALDI-TOF mass spectrometry (BRUKER; see next page)

Date: January 02, 2017

A handwritten signature in black ink, appearing to read 'Sabine Gronow', is written over a light blue horizontal line.

Dr. Sabine Gronow, Leibniz-Institut DSMZ-Deutsche Sammlung
von Mikroorganismen und Zellkulturen GmbH
E-Mail: sgr@dsmz.de

DSM 1103 *Escherichia coli* (Jan 2016)



MALDI-TOF mass spectra acquired on a MALDI Biotyper system (microflex LT mass spectrometer) at Bruker. The respective spectrum is stored at Bruker.