**METHOD SPECIFICATION**

**Faculty of Bioscience, NMBU**

**Method name: Particle size analysis**

BIOVIT-no.: Msp 1016

1. **Method of analysis / Principle / Main instrument**

The method is used to measure the scattering of different particle sizes in a sample.

MALVERN MASTERSIZER 2000 version 5.60

1. **Reference and any modification**

Operational Qualification Certificate from 30.11-2006 in accordance with the official reference procedure OQSMS2K24 OQ Specification.doc

The ISO standard is BS EN ISO 14001: 2004

<http://www.malvern.co.uk/search?OpenAgent&filter=0&lang=unifiedeng&q=iso14001&start=0>

1. **Requirements for the sample quantity and degree of grinding**

The analysis needs about 5-10 grams of the sample material or about 10 ml in liquid form (this depends on the concentration of the sample).

Particle size 0.02 - 2000 µm

Pelletized samples must be dissolved in water and, if necessary sieve the sample.

1. **Requirements for PC connected to the instrument.**

Operating system: Windows 7 Professional (32 bit), Windows VISTA Business Edition, **Windows XP Professional** (Service Pack 2 or higher). The latter is preferable!

Hardware, minimum: IBM compatible P4 1.8GHz, 512MB RAM (1GB preferred for Windows XP Serial RS232 Port (9 pin D-type). 150MB free disk space required to run software. 2GB for Windows VISTA / Windows 7), 80GB hard drive, CD-ROM, 1024 x resolution SVGA screen, 1 free.

1. **Contact people**

**Lab manager:** Hanne K. Hustoft

**Responsible for analysis:** Kari Eikanger/Frank Sundby

1. **Additional literature**

Mastersizer 2000 User Manual MAN0384 issue 1.0 March 2007

Dr. Alan Rawle; “BASIC PRINCIPLES OF PARTICLE SIZE ANALYSIS”

“SOFTWARE UPDATE NOTIFICATION” with file name

QSpec Update Notification for MS2000 v5.60 (PSS0002-18) .pdf