

METHOD SPECIFICATION
Faculty of Biosciences, NMBU

Method name: Tryptophan

BIOVIT No .: Met 1051

1. Analysis method / Principle / Main instrument

The method determines the total content of tryptophan in feed and faeces. The method does not distinguish between D and L- tryptophan.

To determine total tryptophan, the sample is hydrolyzed under alkaline conditions (in a saturated barium hydroxide solution) at 110 °C for 20 hours. An internal standard is added before hydrolysis. The concentration of tryptophan and internal standard in the hydrolysate is determined by liquid chromatography (HPLC) with fluorescence detector.

Main instrument: Ultimate 3000 HPLC with auto-injector (Thermo Scientific) and fluorescence detector (Shimadzu).

2. Reference and any modifications

Commission Regulation (EC) No 152/2009. 27 Jan 2009. Laying down the methods of sampling and analysis for the official control of feed. Annex III, P, Official Journal of the European Union L54 / 1 from 26/02/2009

3. Requirements for grinding and storage

Samples must be grinded to 0.5 mm. Moist samples must either be air-dried (at a temperature not exceeding 50 °C) or lyophilized before grinding. Samples with a high fat content, e.g. fish feed with an extra high (> 40%) fat content, are extracted with petroleum ether (b.p. 40-60 °C) before grinding. The weighed analytical sample should contain approx. 10 mg nitrogen.

4. Contact persons

Lab manager: Hanne Kolsrud Hustoft

Responsible for analysis: Elin Follaug Johnsen

BIOVIT/NMBU						MSP
Prepared by Elin Follaug Johnsen	Approved by Hanne Kolsrud Hustoft	Valid from 01.2016	Revision 03.2020	Replaced 06.2018	Document name: Mps 1051 tryptophan_ENG. docx	Page 1/1