

STN	Krmivá pre zvieratá Metódy odberu vzoriek a analýz Stanovenie karotenoidov v krmných zmesiach a premixoch vysokoúčinnou kvapalinovou chromatografiou s UV detekciou (HPLC-UV)	STN EN 17550 46 7064
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Animal feeding stuffs: Methods of sampling and analysis - Determination of carotenoids in animal compound feed and premixtures by high performance liquid chromatography - UV detection (HPLC-UV)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

**Animal feeding stuffs: Methods of sampling and analysis -
Determination of carotenoids in animal compound feed
and premixtures by high performance liquid
chromatography - UV detection (HPLC-UV)**

Aliments des animaux - Méthodes d'échantillonnage et d'analyse - Détermination de la teneur en caroténoïdes des aliments composés et des prémélanges pour animaux par chromatographie liquide à haute performance couplée à une détection UV (CLHP-UV)

Futtermittel - Probenahme- und Untersuchungsverfahren - Bestimmung von Carotinoiden in Mischfuttermitteln und Vormischungen für Tiere mittels Umkehrphasen-Hochleistungs-Flüssigchromatographie mit UV-Detektion (RP HPLC UV)

This European Standard was approved by CEN on 20 September 2021.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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EN 17550:2021 (E)

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European foreword

This document (EN 17550:2021) has been prepared by Technical Committee CEN/TC 327 “Animal feeding stuffs - Methods of sampling and analysis”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2022, and conflicting national standards shall be withdrawn at the latest by June 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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EN 17550:2021 (E)**Introduction**

The method described in this document aims at constituting a tool for the effective control of carotenoids in feed by the competent authorities in the frame of Regulation (EC) No 1831/2003. Making use of the properties of the isosbestic wavelength for quantification, the method allows, in laboratory routine conditions, determining the sum of all isomers for each carotenoid authorized in poultry or fish feed. This approach can result in higher analytical variation of quantitative results in some matrices, and analysis should be repeated by an alternative method if the obtained variation significantly deviates from data presented in A.3 of this document. These alternative methods may be those optimized for the measurement of single carotenoids authorized under Regulation (EC) No 1831/2003 and available from the European Union Reference Laboratory for Feed Additives.

1 Scope

This analytical procedure specifies a reverse phase high performance liquid chromatographic with UV detection (RP-HPLC-UV) method for the simultaneous determination of four authorized carotenoids in fish compound feed and fish premix, namely astaxanthin (AXN), canthaxanthin (CXN), adonirubin (ADR) and astaxanthin dimethyldisuccinate (AXN DMDS), and of six authorized carotenoids in poultry feed and poultry premix, namely canthaxanthin (CXN); capsanthin (CSN), ethyl ester of beta-apo-8'-carotenoic acid (BACARE), citranaxanthin (CIXN), lutein (LUT) and zeaxanthin (ZEA) at levels ranging from approximately 2 mg/kg to approximately 4 500 mg/kg (depending on the carotenoid). Beta-carotene (BCAR), authorized in compound feed and premixes for all animal species, was also added to the scope. The analytical procedure is fit for the purpose of quantitation of declared carotenoids and labelling confirmation. This document is applicable to feed produced using natural and synthetic feed additives.

Xanthophyll esters like those of lutein, zeaxanthin and capsanthin that might be present in feed materials are not authorized feed additives and therefore not part of the scope of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 6498, *Animal feeding stuffs - Guidelines for sample preparation (ISO 6498)*

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