



NQAC

Nestlé Quality Assurance Center
Dublin

Technical Datasheet

Analysis Name: Total, Soluble, & Insoluble Dietary Fiber in Foods

Method Number: OM-AOAC-991.43_SDF_IDF

Scope of Application: This method applies to processed foods, grain and cereal products, fruits and vegetables which do not contain low molecular weight fiber, or in regions where low molecular weight fiber is excluded from the definition of total dietary fiber. Not applicable to oily samples.

Description: Duplicate test portions of dried foods undergo sequential enzymatic digestion by heat stable α -amylase, protease, and amyloglycosidase to remove starch and protein. For total dietary fiber (TDF), enzyme digestate is treated with alcohol to precipitate soluble dietary fiber before filtering, and TDF residue is washed with alcohol and acetone, dried, and weighed. For insoluble and soluble dietary fiber (IDF and SDF), enzyme digestate is filtered, and residue (IDF) is washed with warm water, dried and weighed. For SDF, combined filtrate and washes are precipitated with alcohol, filtered, dried, and weighed. TDF, IDF, and SDF residue values are corrected for protein, ash, and blank

Sample Weight Required: 25 g

Method Reference: AOAC 991.43

Analytical Platform: Enzymatic, Gravimetric

Special information: If only total dietary fiber results are needed, OM-AOAC-991.43_TDF should be chosen. This method cannot determine values for fiber sources containing low molecular weight fiber including, but not limited to maltodextrin-resistant starches and fructans (inulin or fructooligosaccharides). Low molecular weight fiber should be analyzed with AOAC-2017.16. Presence of gum (ie guar gum) needs to be communicated at the time of sample submission.



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Analyte Reported	Alias	Unit of Measure	Limit of Quantification	Reproducibility
Total Dietary Fiber	TDF	g/100 g	0.5	Culinary: 3-60% Cereals: 3-50%
Insoluble Fiber	IDF	g/100 g	0.5	Culinary: 3-60% Cereals: 3-50%
Soluble Fiber	SDF	g/100 g	0.5	Culinary: 3-60% Cereals: 3-50%