Product Data Sheet

Product number **Various (see table below)**
Revision number RN2.1

Product Name Cereal Protein Extracts, for product numbers and names see table below.

	Barley	Rye	Wheat	Wheat Durum	Spelt	Oat	Millet (Sorghum)	Rice	Corn	Soy*
Albumin + globulin	G018	G021	G036 Leukosin + Edestin	G039	G030	G033	G045	G027	G024	G042
Prolamin	G019 Hordein	G022 Secalin	G037 Gliadin	G040	G031	G034 Avenin	G046 Kafirin	G028 Oryzin	G025 Zein	G043
Glutelin	G020 Hordenin	G023 Secalinin	G038 Glutenin	G041	G032	G035 Avenalin	G047	G029 Oryzenin	G026 Zeanin	G044

* corresponding protein extracts

Background info Cereals have a protein content of about 10%, which are classified by their solubility according to Thomas Burr Osborne (1919, The vegetable proteins.):

Albumins + globulins: soluble in saline
Prolamins: soluble in ethanol
Glutelins: soluble in propanol/urea/DTE

Prolamins and glutelins like gliadin and glutenin from wheat play a crucial role in celiac disease pathophysiology.

Description Cereal proteins were extracted according to the method of Wieser *et al.* as published in Ruh *et al*., 2014.

Albumins and globulins are lyophilized from 0.4 M NaCl, 67 mM Na_2HPO_4, 67 mM K_2HPO_4, pH7.6.
Prolamins are lyophilized from 60% ethanol.
Glutelins are lyophilized from 50% Propanol-1 (v/v), 2 M Urea, 10 mM DTE, 50 mM Tris HCl, pH 7.5.

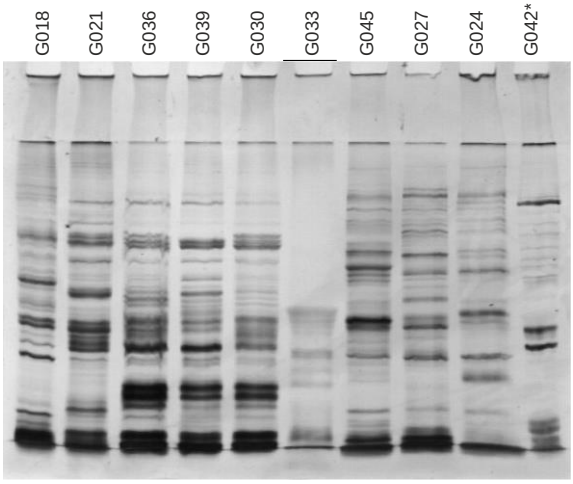

Figure 1:
Silver stained SDS-PAGE gel of **albumin + globulin** fractions (5 µg protein per lane). Protein content was determined with Bradford Assay.
* Corresponding protein extracts

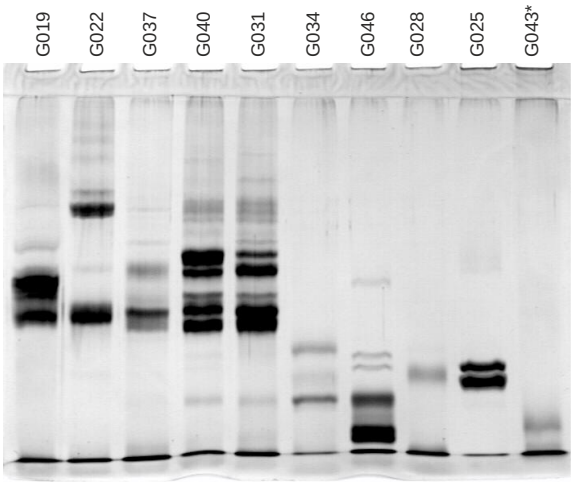

Figure 2:
Silver stained SDS-PAGE gel of **prolamin** fractions (5 µg protein per lane).
Due to poor stainability 50 µg oat prolamin (G034), 20 µg rice prolamin (G028) and 20 µg corresponding soy protein extracts (G043) have been loaded.
Protein content was determined by weighting the freeze-dried material.
* Corresponding protein extracts

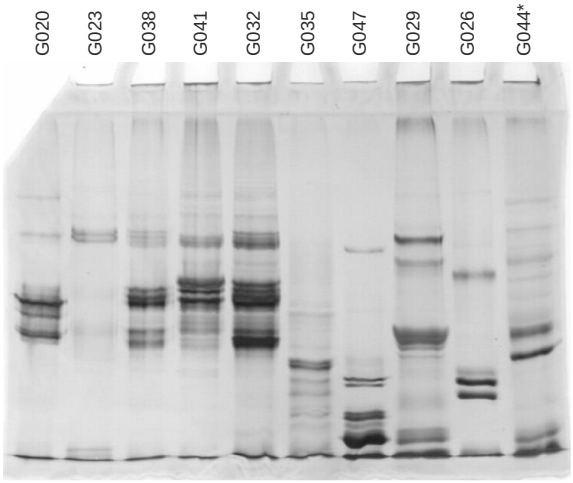

Figure 3:
Silver stained SDS-PAGE gel of **glutelin** fractions (5 µg protein per lane).
Protein content was determined by comparison with weighted prolamins on silver stained SDS-PAGE (figure 2).
* Corresponding protein extracts

Quantity

5 mg

Protein content of albumins and globulins was determined using Bradford Assay against BSA as reference.
Prolamin quantities were determined by weighting the freeze-dried material (± 0.1 mg per vial).
Glutelin quantities were determined by comparison with weighted prolamins on silver stained SDS-PAGE.

Appearance

White lyophilized solid

Reconstitution

Add the volume of water or buffer specified in the certificate of analysis under aliquotation or the desired volume to the vial of lyophilized powder. Rotate vial gently until solid dissolves. After reconstitution, the solution should be stored frozen in working aliquots.

Storage

Store at -20°C, desiccate

Reference

Ruh *et al.*, J. Agric. Food Chem. 2014, 62:7604-11;
Wieser *et al.*, Cereal Chem. 1998, 75:644-50

Product Data Sheet

Product number **Various (see table below)**
Revision number RN2.1

Related products	A011 - Monoclonal antibody to gliadin (clone XGY1) A057 - Monoclonal antibody to deamidated Gliadin A062 - Monoclonal antibody to deamidated and non-deamidated Gliadin A035 - Monoclonal antibodies to gliadin (Set No 1 comprising 12 gliadin antibodies: clone XGY1; XGY2; XGY4; XGY5; XGY8; XGY10; XGY12; XGY15; XGY16; XGY17; XGY23 and XGY24)
Release date	01 November 2023
NOTE	INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.