

SAMPLE PREPARATION

Individual Detergents

	Detergent	Product Code	Application
Nonionic	DDM (n-Dodecyl- β -D-maltoside)	D 4641	Nonionic detergent for selective extraction ^{1, 2, 3}
	Octyl- β -D-glucopyranoside	O 8001	Used for selective extraction; substitutes for SDS after 2D so proteins can be analyzed by MS ^{4, 5} ; significantly increases the resolution of plant polypeptides in 2D gels ⁶ ; preferred for myelin membrane proteins. ⁷
	Octyl- β -D-Thioglucoopyranoside	O 6004	Dialyzable detergent, used for solubilizing membrane proteins ⁸ and for dissociation of protein complexes. ⁹
	TWEEN® 20, Sigma Ultra (low metal content)	P 7949	Useful for removal of peripheral membrane proteins ^{10, 11}
	Saponin	S 4521	Useful for permeabilizing or lysing cells, ^{12, 13} also as an adjuvant in vaccines ¹⁴
Anionic	Sodium cholate hydrate	C 1254	Useful for the extraction of membrane proteins ^{15, 16}
	Sodium dodecyl sulfate (SDS)	L 3771	Useful for SDS-PAGE, must be at low concentration or removed prior to IEF ¹⁷
	Sodium deoxycholate	D 6750	Useful for the extraction of membrane receptors ¹⁸ and other plasma membrane proteins ¹⁹ and for nuclei isolation. ²⁰
Cationic	Hexadecyltrimethylammonium bromide (CTAB)	H 6269	Useful for precipitating DNA ^{21, 22} and as a surfactant in drug/vaccine delivery systems ²³
	Trimethyl tetradecyl ammonium bromide (TTAB)	T 4762	Useful as a surfactant in capillary electrophoresis ^{24, 25}
Zwitterionic	Aminosulfobetaine-14 (ASB-14)	A 1346	Useful for the solubilization of proteins for analysis by 2D Electrophoresis ^{26, 27}
	C7BzO	C 0856	Useful for the solubilization of proteins for analysis by 2D Electrophoresis ^{28, 29}
	CHAPS	C 9426	Surfactant of choice for many IEF applications ³⁰ , solubilizes native membrane proteins ^{31, 32} and organelles ³³
	3-(Decyldimethylammonio) propanesulfonate inner salt (SB3-10)	D 4266	Useful for protein solubilization ^{34, 35}
	3-(N,N-Dimethyloctadecylammonio) propane sulfonate (SB3-18)	O 8004	Useful for extracting proteins for chromatographic, mass spec, and electrophoretic analysis ^{36, 37}

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