



Isolating Primary and Stem Cells?

Primary Cell Isolation Enzyme Digestion Scale Strongly Digestive Papain Trypsin AOF **Elastase** STEMzyme™ 2 Hyaluronidase STEMzyme™ 1 Collagenase AOF Type B Collagenase AOF Type A Collagenase Type 2 Collagenase Type 1 Collagenase AOF Type C Collagenase Type 4 **Neutral Protease** Collagenase Type 3 Non-AOF (Dispase®) Deoxyribonuclease 1 Weakly Digestive

Worthington Collagenase Products, Specifications and Applications Table					
Product Code	Collagenase	Caseinase	Clostripain	Tryptic	Description/Applications*
	CDU/mgdw	u/mgdw	u/mgdw	u/mgdw	
Partially Purified					
CLS-1	≥125	≥200	≤4.0	≤0.5	Balanced activities/Adipose, Adrenal, Epithelial, Liver, Lung
CLS-2	≥125	≥200	≥3.5	≥0.1	Higher proteolytic activities/Bone, Heart, Liver, Thymus
CLS-3	≥100	≥50	≤3.0	≤0.3	Lower proteolytic activities/Mammary
CLS-4	≥160	≥100	≤3.0	≤0.1	Lower tryptic activity/Pancreatic Islets
CLSS-1	≥125	≥200	≤4.0	≤0.5	0.22µ Filtered CLS-1 in 50mg & 1gm Vials
CLSS-2	≥125	≥200	≥3.5	≥0.1	0.22µ Filtered CLS-2 in 50mg & 1gm Vials
CLSS-3	≥100	≥50	≤3.0	≤0.3	0.22µ Filtered CLS-3 in 50mg Vials
CLSS-4	≥160	≥100	≤3.0	≤0.1	0.22µ Filtered CLS-4 in 50mg & 1gm Vials
CLSH	≥125	≥200	≤4.0	≤0.5	0.22µ Filtered, ≥22,500U CLS-1 & 30U ESL component of HIS kit
Animal Origin Free					
CLSAFA	≥150	≥150	≤8.0	≥0.1	Balanced Activities/AOF Stem Cell & Tissue Bioprocessing
CLSAFB	≥300	≥300	≤5.0	≤0.5	Higher Activities/AOF Stem Cell & Tissue Bioprocessing
CLSAFC	≥200	≥150	≤3.0	≤0.1	Lower Protease Activities/AOF Stem Cell & Tissue Bioprocessing
CLSAFAS	≥150	≥150	≤8.0	≥0.1	0.22μ Filtered AOF CLSAFA in 50mg vials
CLSAFBS	≥300	≥300	≤5.0	≤0.5	0.22μ Filtered AOF CLSAFB in 50mg vials
CLSAFCS	≥200	≥150	≤3.0	≤0.1	0.22µ Filtered AOF CLSAFC in 50mg vials
STEMzyme™ A	nimal Origin Fre	e Blends			
STZ1	≥250	≥1,000	≤5.0	≤0.5	0.22µ Filtered CLSAFB & NPRO/AOF Stem Cell & Tissue Bioprocessing
STZ2	≥250	≥2,000	≤5.0	≤0.5	0.22µ Filtered CLSAFB & NPRO/AOF Stem Cell & Tissue Bioprocessing
Chromatographical	ly Purified				
CLSPA	≥500	≤50	≤2.0	≤0.25	Low Protease/Collagen Studies, Tissue Digestion combined with other proteases
CLSPANK	≥500	≤50	≤2.0	≤0.25	0.22μ Filtered, ≥1,500U CLSPA component of NCIS kit

^{*} Correlations between type and effectiveness with different tissues have been good, but not perfect, and may be dependent partly on parameters of use and objectives as well as lot-to-lot variations. For more information see the Collagenase Sampling Program information.







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FREE Collagenase Sampling Program!

The demand for safer biologicals and biopharmaceuticals has led Worthington to introduce several Animal Origin Free (AOF) enzymes for primary/stem cell isolation, tissue culture research and vaccine bioprocessing. Scientists working in regenerative medicine applications including the isolation of stem cells, tissue transplantation, artificial organ development and vaccine production would benefit from AOF enzymes since there is no risk of potential BSE/TSE and/or mammalian viruses contaminants. In addition, the use of AOF enzymes eliminates many of the quality and regulatory issues and concerns associated with enzymes purified from animal sources.

The lot-to-lot variation which is typical of enzyme preparations makes it important to pre-test a particular lot of enzyme you are planning to use in your experiment. Many years ago we found that the most practical approach for the researcher is to pre-sample several different lots of collagenase at a time and select the best of the group. As the world's leading manufacturer of collagenase, Worthington is able to offer the greatest number of different lots at any given time and recommend specific lots for an application. Regular grades of Worthington Animal Origin Free Collagenase are also available for sampling.

There is no charge for participating in the collagenase sampling program. Under the program, individual researchers are provided with 100 mg samples of up to three different lots of collagenase for evaluation in their own assay systems. A period of 60 days is allowed for your evaluation of these samples. A minimum of 3 grams of each lot will be placed on HOLD, reserved in your name. When you determine which lot performs best for you, simply specify the lot desired when ordering.



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