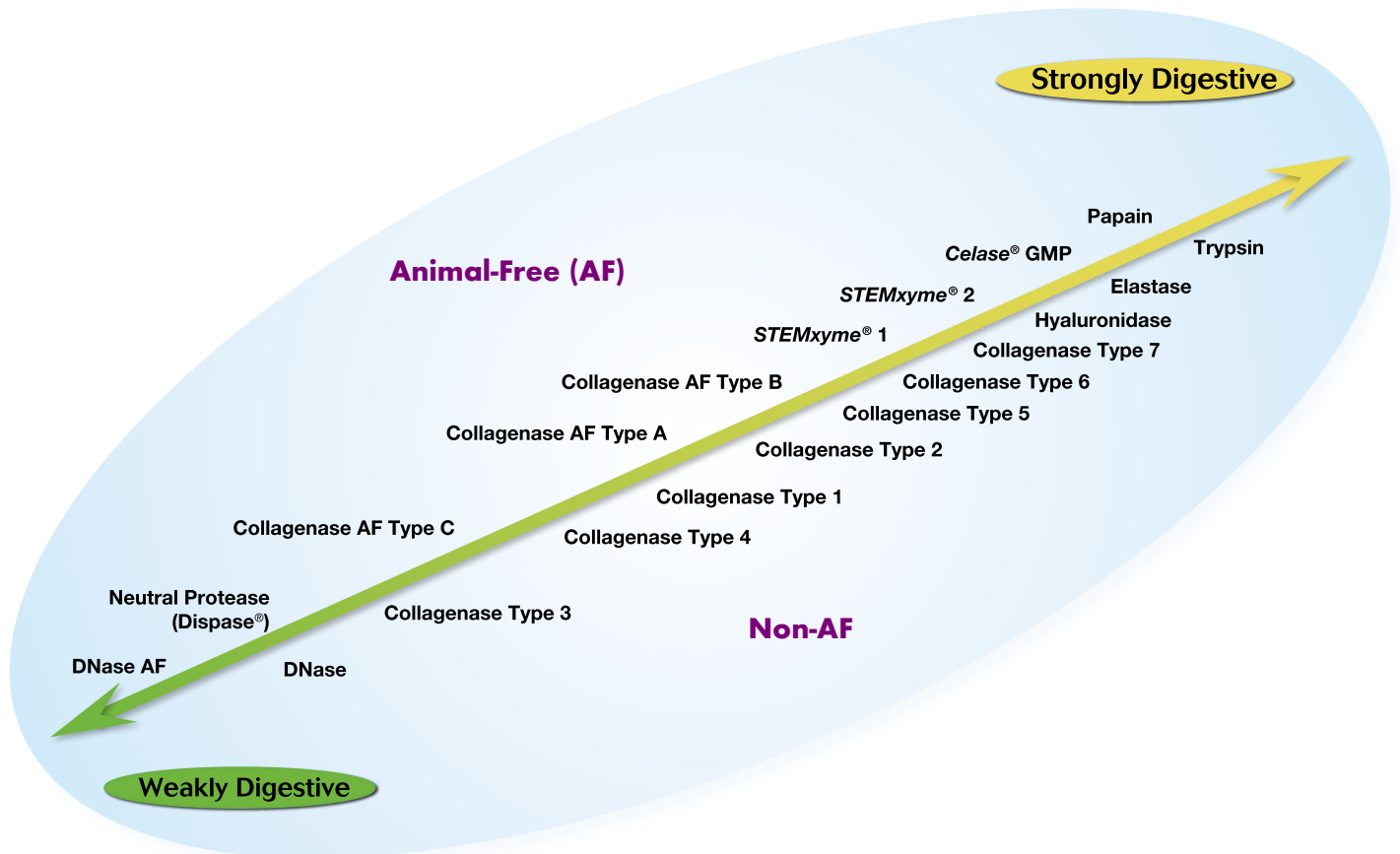


# You Have The Research, Worthington Has The Enzymes

Tissue Dissociation/Primary & Stem Cell Isolation



## PRIMARY CELL ISOLATION ENZYME DIGESTION SCALE



## FREE COLLAGENASE SAMPLING PROGRAM

As the primary producer of research grade collagenase, we invite researchers to explore our Free Collagenase Sampling Program. The program includes:

- 100 mg samples of up to three different lots of collagenase for evaluation in your own cell isolation systems.
- A period of 60 days is allowed for your evaluation of these samples.
- A minimum of 3 grams of each lot of collagenase will be placed on HOLD, reserved in your name. When you determine which lot performs best for you, specify the lot desired when ordering. The only requirement, once a suitable lot of collagenase is found, is that you purchase a minimum of 3 grams of the material.
- Go to: <https://www.worthington-biochem.com/CLS/clssamp.html>

Worthington's Collagenase Lot Selection Tool is also available online. This feature was designed to help researchers select and evaluate current collagenase lots that match previous lots or desired activity profiles. Users may enter target values for collagenase, caseinase, clostripain, and tryptic activities or specify previous lot numbers. Worthington Customer and Technical Service personnel are available via phone and email to assist with collagenase or any other product inquiries.

## WORTHINGTON COLLAGENASE PRODUCTS, SPECIFICATIONS AND APPLICATIONS TABLE

Product Code	Collagenase	Caseinase	Clostripain	Tryptic	Comments/Applications*
	CDU/mgdw	u/mgdw	u/mgdw	u/mgdw	
<b>Partially Purified</b>					
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
CLS-5	≥450	≥450	≤4.0	≤0.3	Higher collagenase and caseinase activities
CLS-6	≥400	≥1,000	≤4.0	≤0.5	Higher activity with caseinase to collagenase ratio ~2:1, designated to be enriched for Type II (col H) collagenase relative to Type I (col G)
CLS-7	≥1,000	≥2,000	≤8.0	≤0.5	Contains collagenase and caseinase activities 4X higher than collagenase Types 1 and 2
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
CLSS-5	≥450	≥450	≤4.0	≤0.3	Higher collagenase and caseinase activities
CLSH	≥125	≥200	≤4.0	≤0.5	0.22μ Filtered, ≥22,500U CLS-1 & 30U ESL component of HIS kit
<b>Animal Free</b>					
CLSAFA	≥150	≥150	≤8.0	≥0.1	Balanced Activities/AF Stem Cell & Tissue Bioprocessing
CLSAFB	≥300	≥300	≤5.0	≤0.5	Higher Activities/AF Stem Cell & Tissue Bioprocessing
CLSAFC	≥200	≥150	≤3.0	≤0.1	Lower Protease Activities/AF Stem Cell & Tissue Bioprocessing
CLSAFAS	≥150	≥150	≤8.0	≥0.1	0.22μ Filtered AF CLSAFA in 50mg vials
CLSAFBS	≥300	≥300	≤5.0	≤0.5	0.22μ Filtered AF CLSAFB in 50mg vials
CLSAFCS	≥200	≥150	≤3.0	≤0.1	0.22μ Filtered AF CLSAFC in 50mg vials
<b>STEMxyme® Animal Free Blends of Collagenase and Neutral Protease</b>					
STZ1	≥250	≥1,000	≤5.0	≤0.5	0.22μ Filtered CLSAFB & NPRO/AF Stem Cell & Tissue Bioprocessing
STZ2	≥250	≥2,000	≤5.0	≤0.5	0.22μ Filtered CLSAFB & NPRO/AF Stem Cell & Tissue Bioprocessing
<b>Chromatographically Purified</b>					
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.

Tissue dissociation/primary cell isolation and cell harvesting are principal applications for enzymes in tissue culture, stem cell research and cell biology studies. The goal of a cell isolation procedure is to maximize the yield of functionally viable, dissociated cells. There are many parameters which may affect the outcome. The choice of enzyme is an important parameter. Worthington's Tissue Dissociation Guide summarizes our knowledge of how these enzymes accomplish the "routine" operations of tissue dissociation and primary cell harvesting. This technical guide describes standard lab procedures; offers a logical experimental approach for establishing a cell isolation protocol; and lists many tissue specific references to aid development of an effective method. For more information, go to: [TissueDissociation.com](http://TissueDissociation.com)