

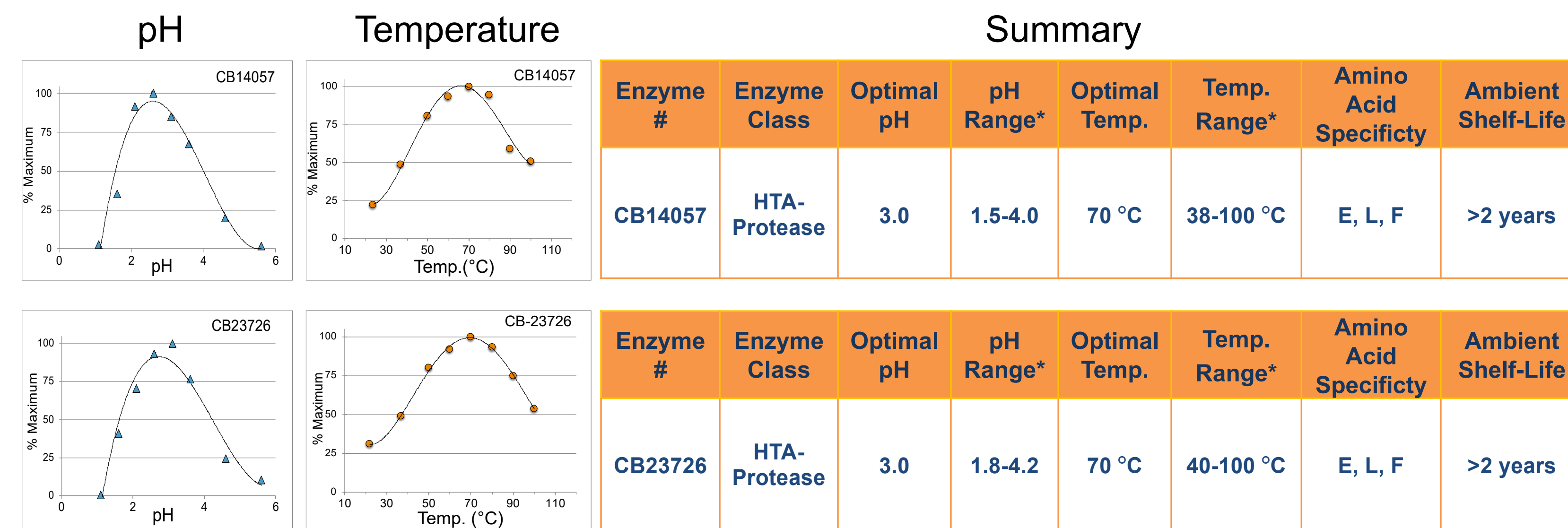
From Volcanoes to the Bench

Advantages of Novel Hyperthermoacidic Archaeal Proteases for Proteomics Workflows

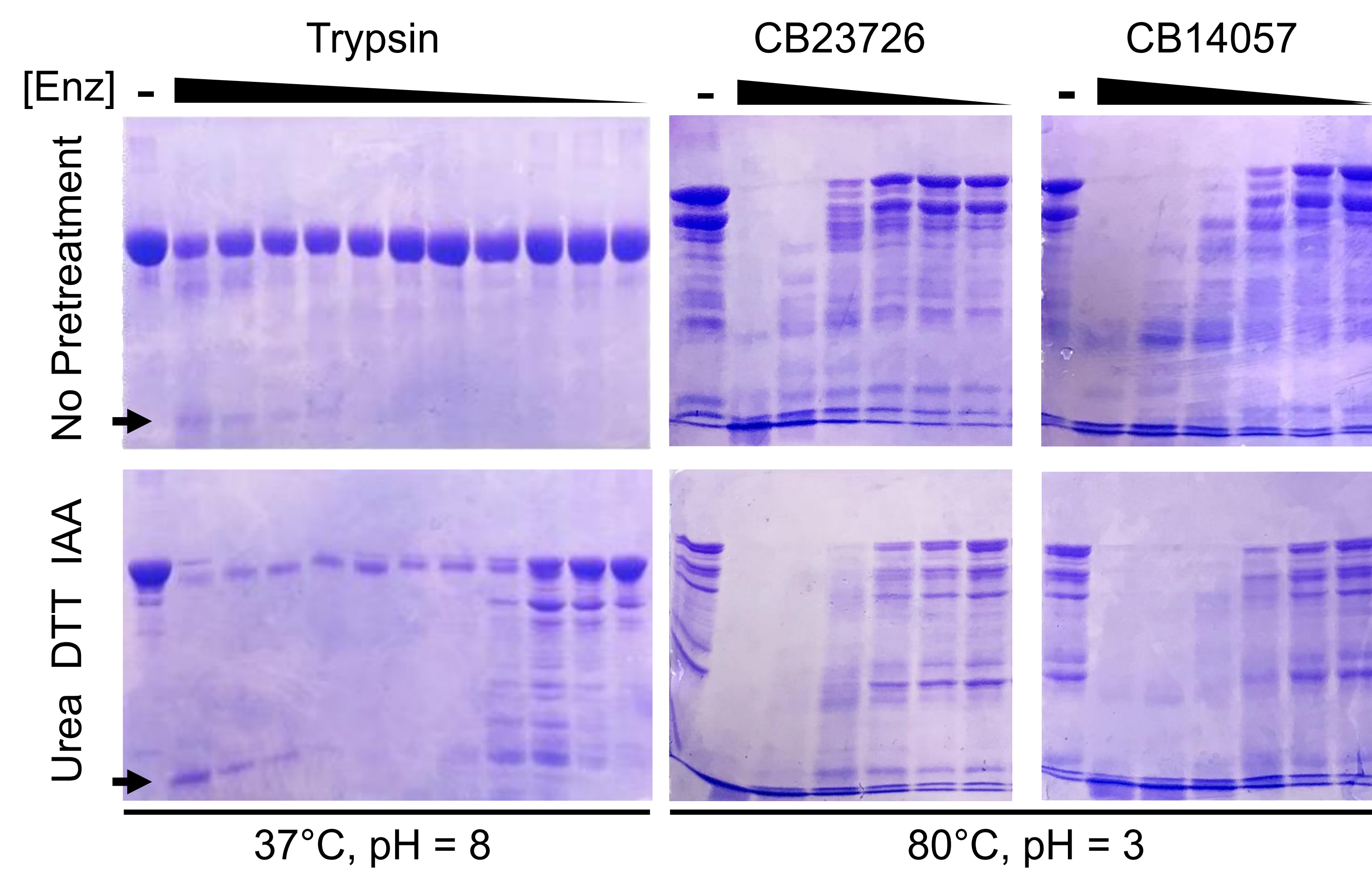
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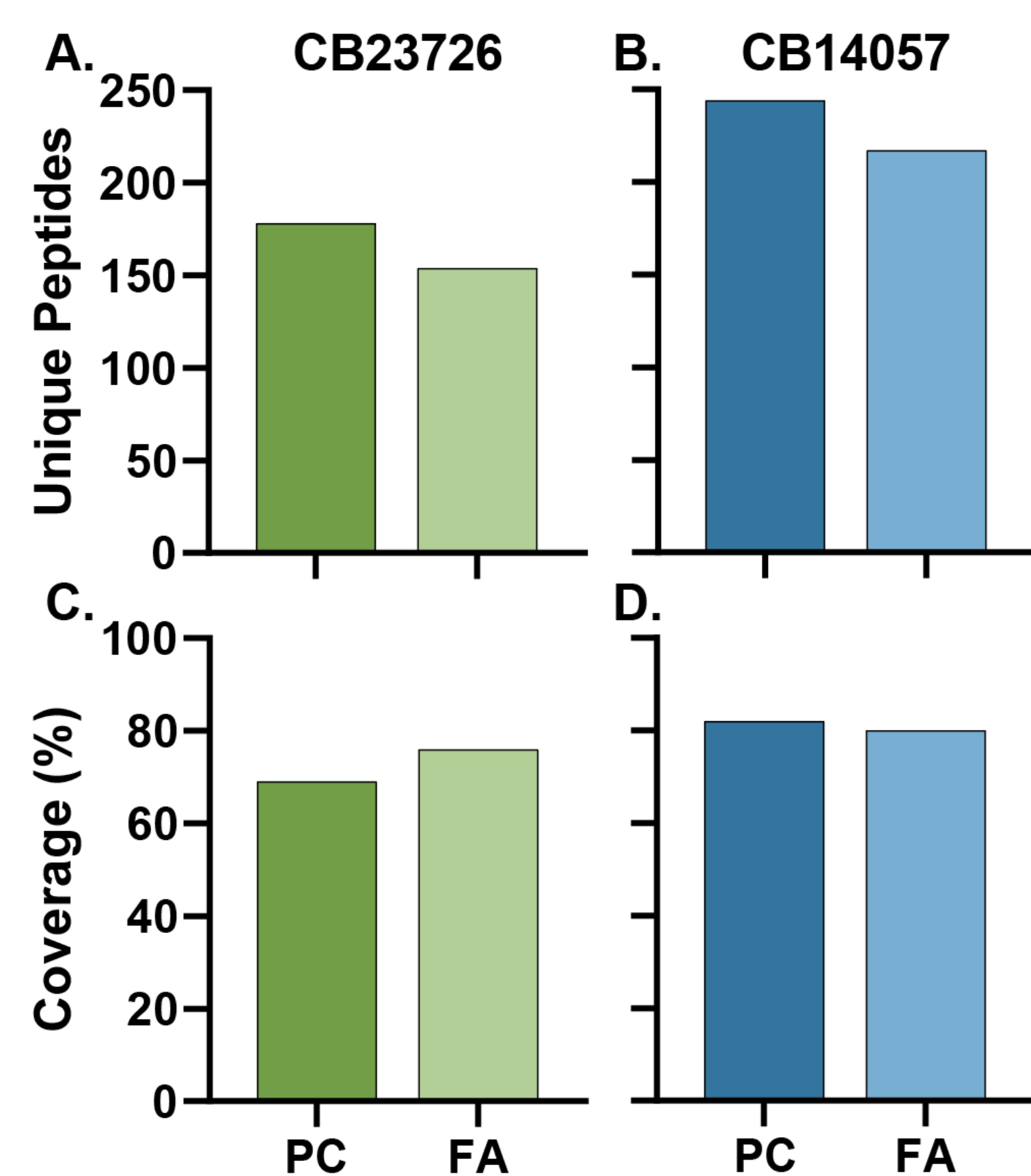
Archaeal Thermopsins Have Extreme Optima



Hot/Acid Reactions Obviate Chaotropes and IAA

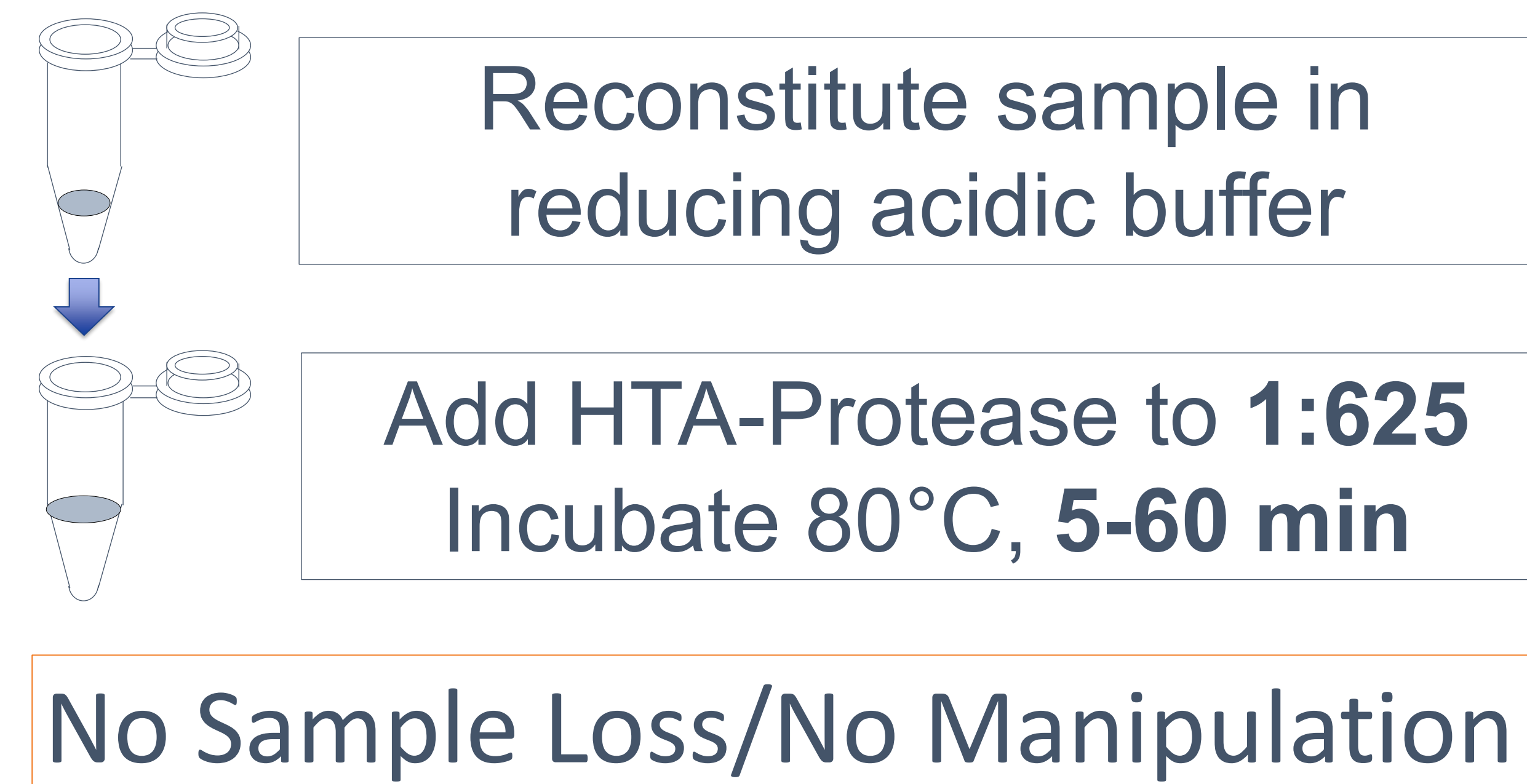


HTA-Proteases Function in Dilute Formic Acid

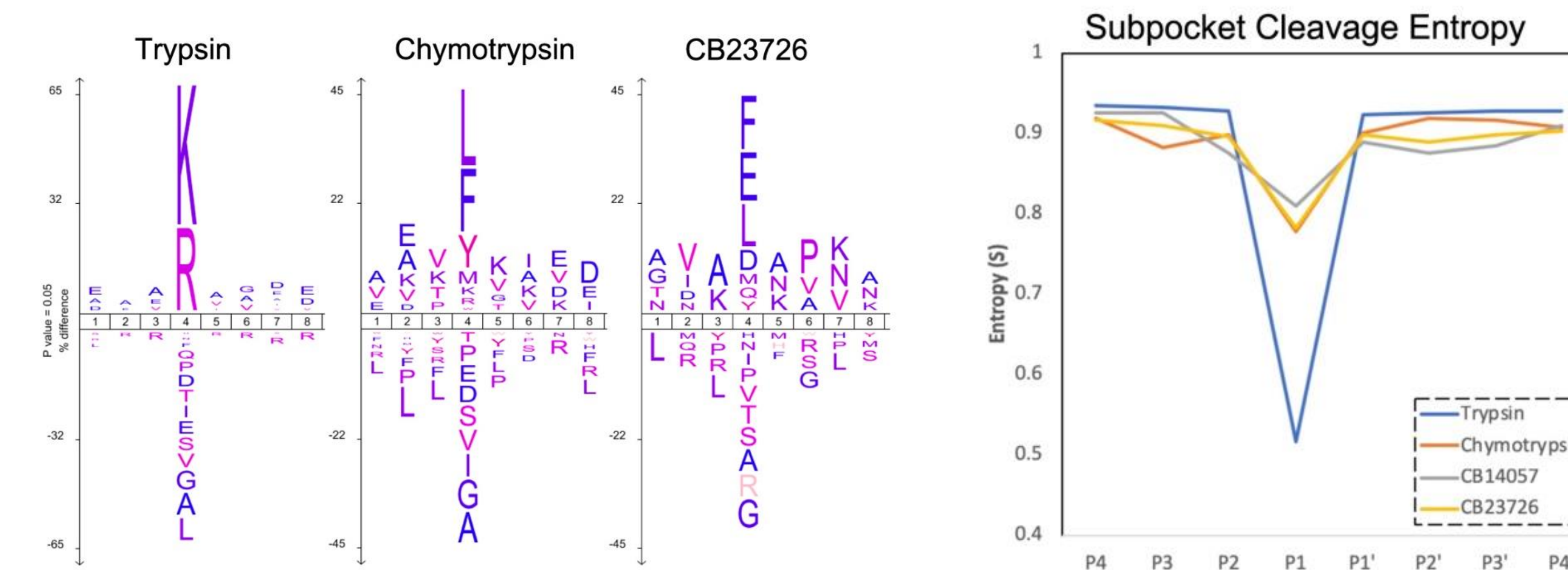


Comparison of phosphate/citrate (PC) and formic acid (FA) buffers on HTA-Protease activity on BSA. Unique peptide identifications for CB23726 (A) and CB14057 (B) digests in either PC or FA. Average sequence coverage of BSA resulting from CB23726 (C) and CB14057 (D) digests using either PC or FA reaction buffers.

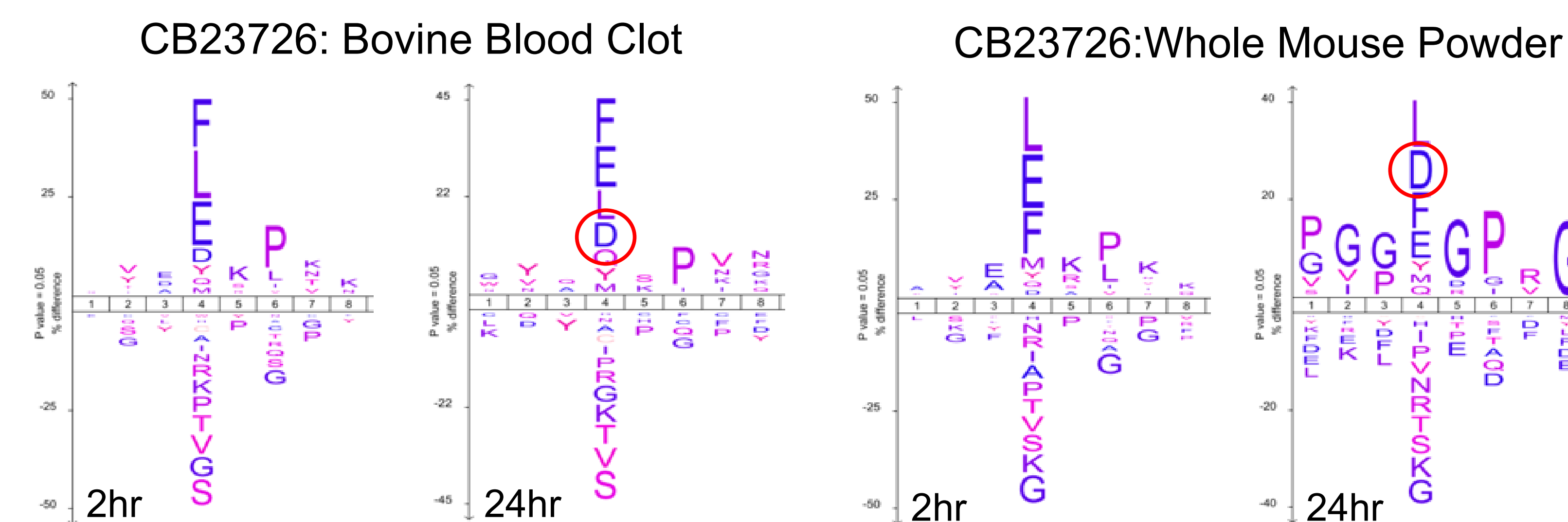
1-Step/5-min Sample Prep



E,L,F Specificity Akin to Chymotrypsin



Complex Samples Efficiently Digested



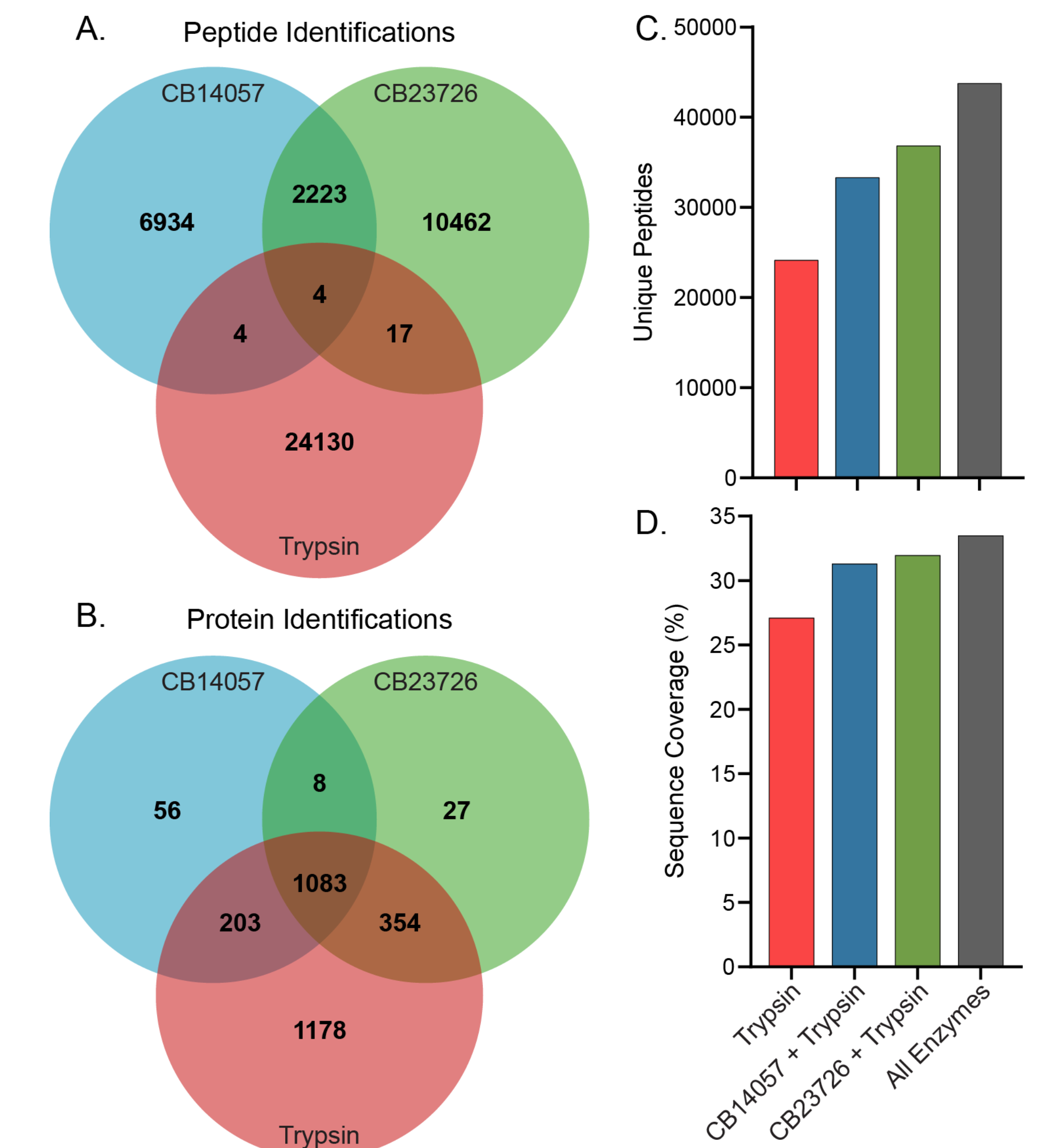
Chemical Hydrolysis Negligible in Brief Digests

HTA-Proteases Available

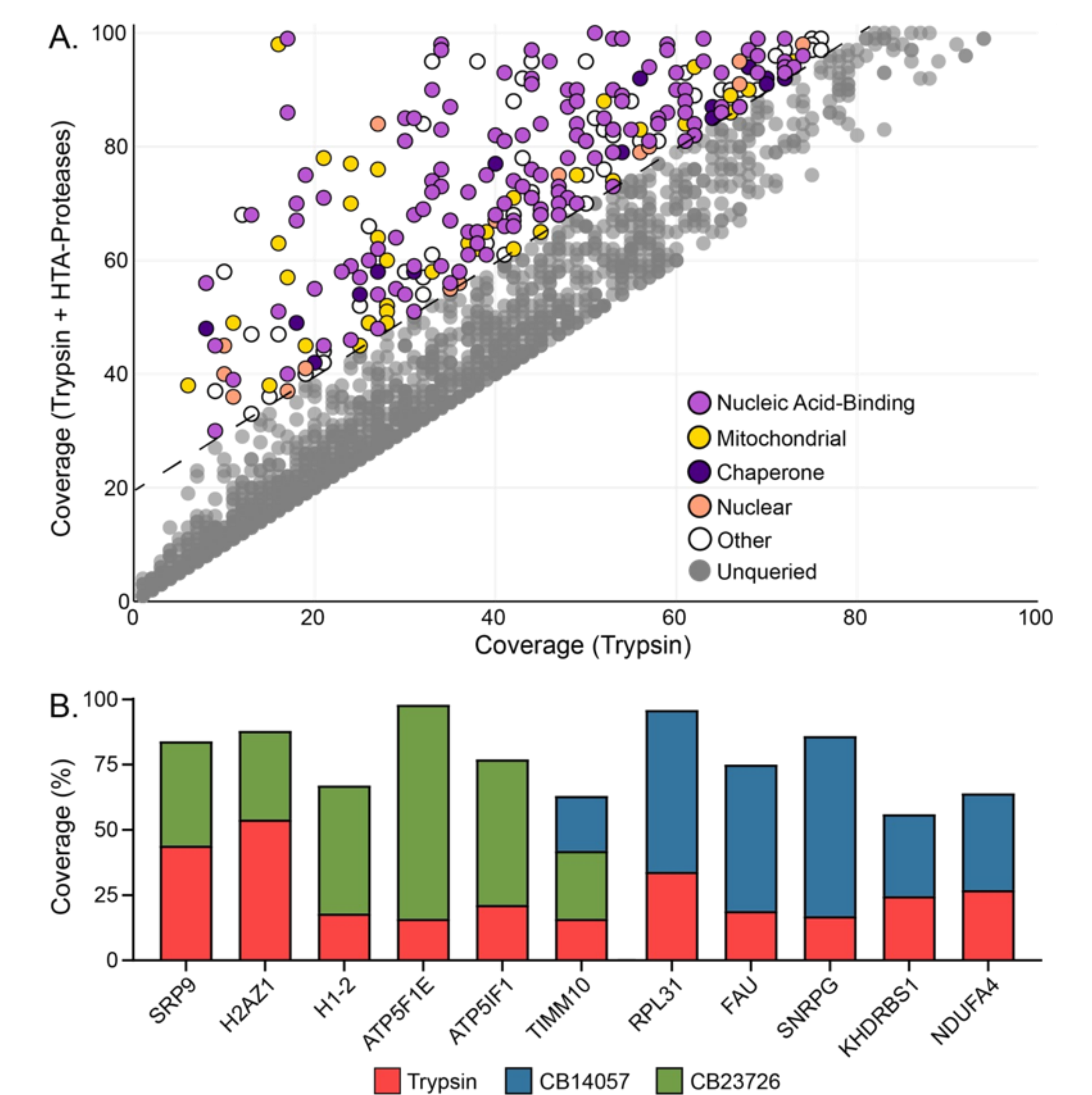
CinderBio

CB23726 CB14057

Increased PSM's and Coverage



Better Coverage for 53% of Proteins



Bias for Nucleo- and Membrane Proteins

[1] M.C. McCabe, V. Gejji, A. Barnebey, G. Suizdak, L.T. Hoang, T. Pham, K.Y. Larson, A.J. Saviola, S.M. Yannone, K.C. Hansen, From volcanoes to the bench: Advantages of novel hyperthermoacidic archaeal proteases for proteomics workflows, *J Proteomics* (2023) 104992.
[2] S.M. Yannone, J.O. Fuss, A. Barnebey, Methods for rapidly digesting biopolymers with ultrastable enzymes for mass spectrometry-based analyses, in: USPTO (Ed.) Cinder Biological, Inc., US, 2017.