

# Replace QAC's and Chlorine with Natural Hyper-Stable Enzymes

New enzyme technologies derived from volcanic hot-spring microbes

- CinderBio enzymes function optimally in sanitizing conditions (80-100°C, pH2-3).
- Faster enzyme turnover reduces cleaning times and contact times.
- CinderBio enzymes store for years in liquid ambiently (no spoilage).
- CinderBio enzymes remove biofilms and biofilm residues (EPS).
- CinderBio enzymes can be reused multiple times in CIP applications.
- Proteases, lipases, and other enzymes can be co-formulated to suit application soils.
- Useful for membranes, soak tanks, CIP, and other cleaning and sanitation applications.
- CinderBio enzymes are functional in peracetic acid and detergents/surfactants.

## Introducing HyperThermoacidic Archaeal enzymes for cleaning and sanitation

CHARACTERIZED HTA-ENZYMES

Catalog #	Class	Optimal pH	pH Range*	Optimal Temp.	Temp. Range*	Half-life (at optima)
CB-13366	Endoglucanase (cellulase/xylanase)	3.5	2.5-5.0	90 °C	75-97°C	2.5 days
CB-13961	Endoglucanase (cellulase/xylanase)	2.0	1.2-4.5	75°C	60-85°C	TBD
CB-13184	α-amylase	3.5	2.2-4.5	100°C	80-110°C	12 days
CB-14057	Endoprotease	3.0	1.5-4.0	70 °C	38-100 °C	10 days
CB-23726	Endoprotease	3.0	1.8-4.2	70 °C	40-100 °C	6 days
CB-13153	Endoprotease	2.5	1.5-4.5	80°C	50-105 °C	29 hrs
CB-23117	Esterase/Lipase	6.5	4.5-7.5	90°C	80-100°C	3.7 days
CB14533	Esterase/Lipase	7.5	6.5-8	90°C	80-100°C	3.35 days

\* Temperature and pH ranges are conditions that give ≥ 50% maximal activity at optima for other conditions.

## INQUIRE ABOUT FORMULATIONS FOR YOUR APPLICATIONS

Contact us at [Info@CinderBio.com](mailto:Info@CinderBio.com)