Analytical Testing Laboratory
7271 Engle Rd Unit 201A, Middleburg Heights, OH 44130
sonic-laboratories.com
Verify at sonic-laboratories.com/coa-lookup **Code: W6PZ48HY**

CERTIFICATE OF ANALYSIS

COA #: **SD20260924_017_CART**

SAMPLE INFORMATION

Client	Zentra Brands Limited	**Accession #**	SD20260924_017
Compound	Cartalax	**Date Received**	09/24/2026
Molecular Formula	C12H19N3O8	**Date Reported**	09/28/2026
Appearance	White lyophilized powder	**Labeled Quantity**	20mg
Sample Form	Lyophilized Vial	**Lot / Batch #**	ZC0048
Storage	Room Temp	**CAS Number**	N/A
Cap Color	Black		



All Chemical Analysis Performed by LC-MS/MS

ANALYTICAL RESULTS

Test / Analysis	Method	Specification	Result	Status
Identity (Mass Confirmation)	LC-MS/MS	Matches reference mass	Cartalax	**Pass**
Purity	LC-MS/MS	≥ 95.0%	99.14 %	**Pass**
Net Peptide Content	LC-MS/MS	Report value	21.26 mg	**Pass**
Observed Molecular Mass	LC-MS	Within ± 1.0 Da	365 [M+Na]	**Pass**
Theoretical Molecular Mass	Reference	—	333.1172Da	**Pass**
Related Substances / Impurities	LC-MS/MS	Report value	Not Detected	**Pass**
Residual Solvents	LC-MS/MS	Report value	Not Detected	**Pass**

John Humes, MS. **John Humes, MS.**
Analyzed by · Laboratory Analyst · 09/28/2026

Chetan Soni, PhD. **Chetan Soni, PhD.**
Approved by · Laboratory Director · 09/29/2026

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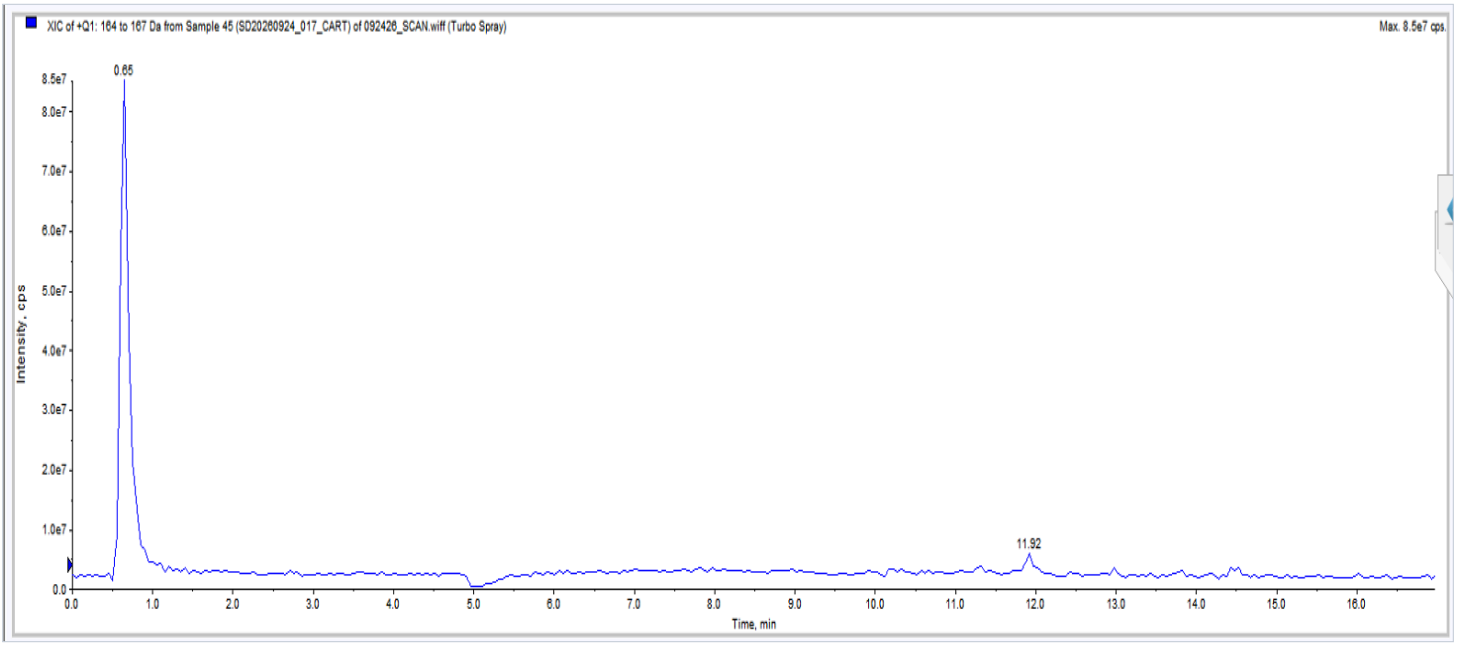
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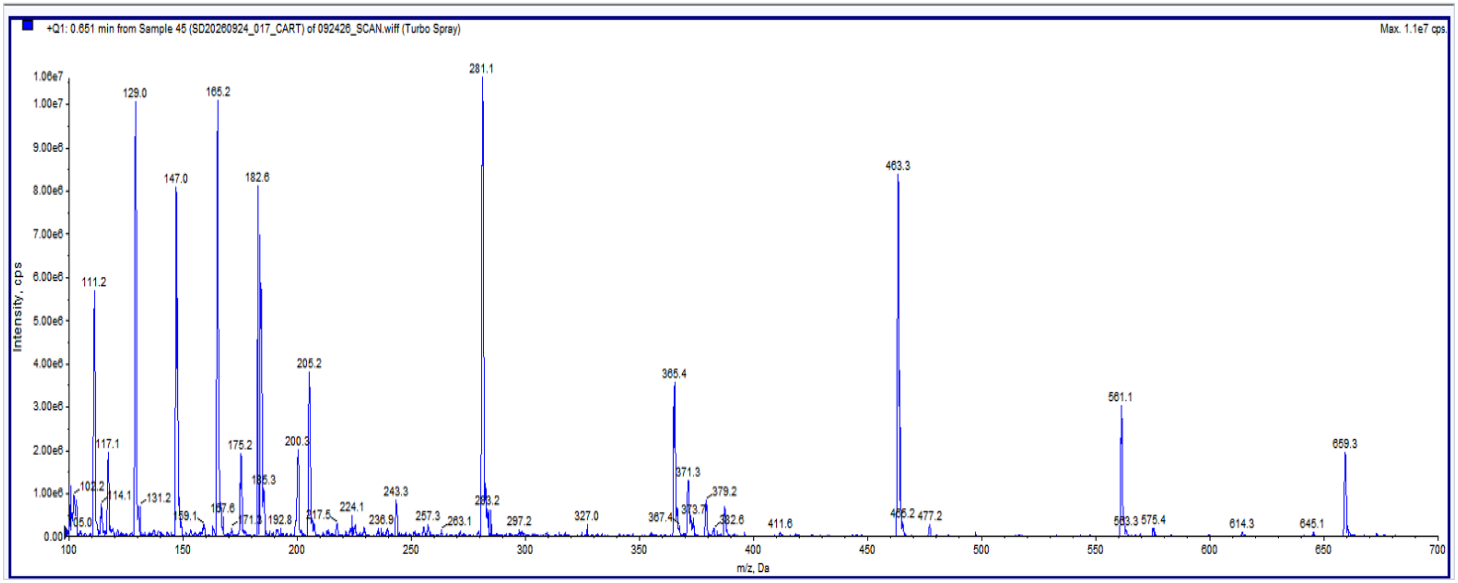
ANALYTICAL DATA

COA #: **SD20260924_017_CART**

CHROMATOGRAM



MASS SPECTRUM (LC-MS)



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ANALYTICAL INTERPRETATION

Chromatogram

Retention Time Match

Mass Spectrum (LC-MS)

Analyte: Cartalax (Ala–Glu–Asp)
Sample ID: SD20260924_017_CART
Method: LC-MS, positive-mode Q1 full scan, TurboSpray ionization
Retention Time: 0.651min
Molar mass (neutral): ≈333.3Da

Q1 scan interpretation
The Q1 full-scan spectrum at 0.651min shows a low-mass, highly polar peptide profile consistent with Cartalax (MW ≈333.3Da), with dominant singly charged ions and associated low-mass fragments under positive ESI conditions. The very early elution and fragment-rich spectrum are consistent with the highly hydrophilic nature of this tripeptide.

Observed ions and charge states (this Q1 scan)
365.4m/z — [M+Na]
Label: Sodium adduct of Cartalax; consistent with MW ≈333.3Da

281.1m/z — [fragment+H]
Label: Singly charged fragment ion (loss of acidic side chain / neutral loss)

165.2 m/z [M+2H]+

463.3, 581.1, 659.3m/z — [cluster/adduct+H]
Label: Higher-mass adduct/cluster ions (salt/solvent/peptide aggregates) typical of very polar, early-eluting peptides

111.2, 129.0, 147.0, 182.6, 205.2m/z
Label: Singly charged low-mass fragment ions consistent with backbone and side-chain cleavage of Cartalax

No distinct [M+H] is resolved as a dominant peak in this Q1 scan; the spectrum is instead characterized by strong sodium adduct and fragment ions, typical for highly polar, low-MW peptides under these conditions.

Identity conclusion
Identity by LC-MS Q1 full scan — Cartalax supported.
The observed [M+Na] (365.4m/z), associated fragment ions, and early elution at 0.651min are consistent with the validated LC-MS profile for Cartalax (MW ≈333.3Da), with no extraneous peptide envelopes or non-correlated species present.

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