Gold Standard Analytics

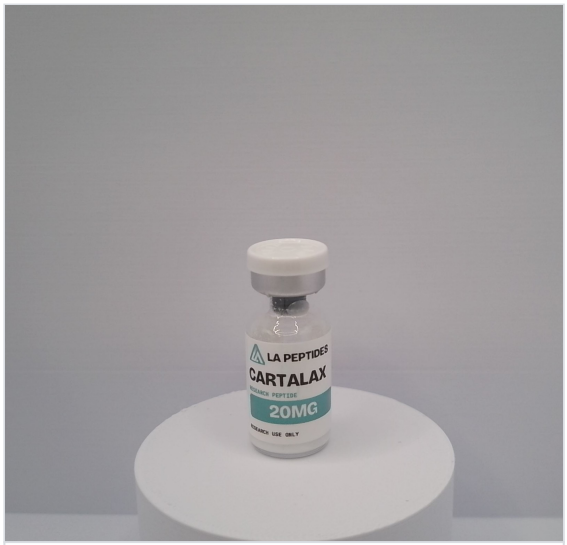
Gold Standard Analytics LLC, Houston, TX

CERTIFICATE OF ANALYSIS

Report GSA-COA-CUST-LA-2218CART-20261109-5 · issued Nov 18, 2026

LA Peptides

PRODUCT	ORDER	SAMPLE
Cartalax (Ala-Glu-Asp)	GSA-2026-000080	LA2218-CART
LABEL	**LOT**	**ISSUED**
Cartalax	2218	Nov 18, 2026



THE SAMPLE AS RECEIVED

IDENTITY

Cartalax

confirmed by mass

PURITY

96.5 %

HPLC-UV, 214 nm, 2 injections

ENDOTOXINS

< 0.050 EU/mL

Pass; spike recovery 112 %

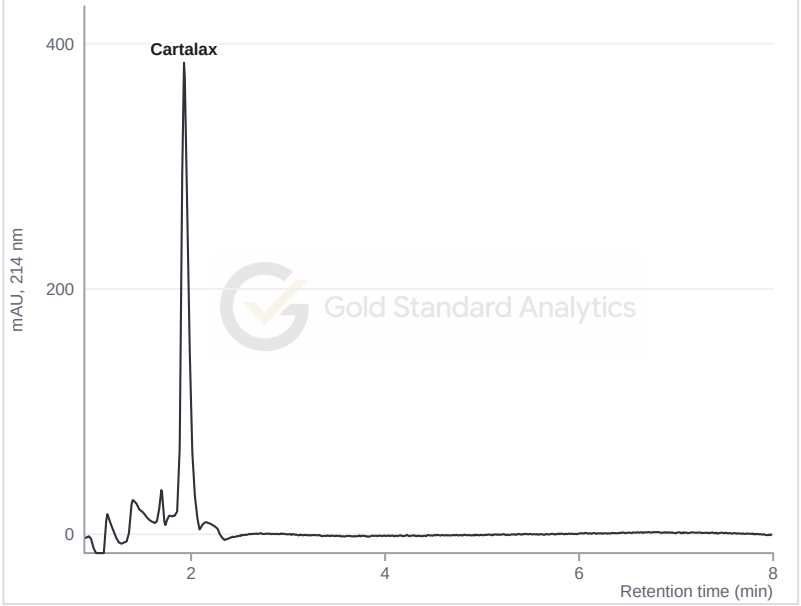
STERILITY

No growth

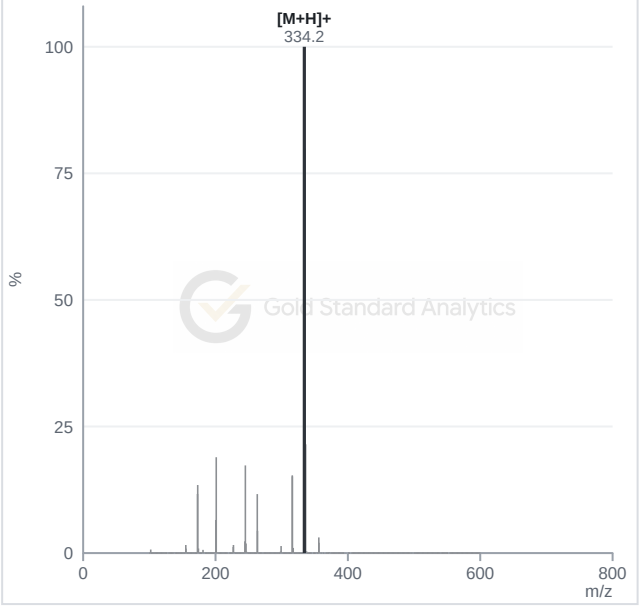
Pass; both canisters, 14 days

Heavy metals USP <232>, ICP-MS: Pb, Cd, Hg, As, Co, V, Ni — **Pass**

HPLC CHROMATOGRAM UV, 214 nm



MASS SPECTRUM main peak (1.93 min)



RELEASED BY

Ian Ebert
Laboratory Director · Nov 19, 2026

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Results are not covered by ISO/IEC 17025 accreditation. Results relate only to the sample as received and tested.

The sample

Lot 2218 · LA Peptides

Customer	**LA Peptides**	Lot	**2218**
Order	**GSA-2026-000080**	Prepared	**Vial contents dissolved in 2 mL water with 0.1 % formic acid, then diluted 1 in 10, 6 Nov 2026**
Sample	**LA2218-CART**	Tested	**09 Nov 2026**
Label	**Cartalax**	Tests	**Identity, Purity, Impurity breakdown, Bacterial endotoxins, Sterility, Elemental impurities**

Graphs

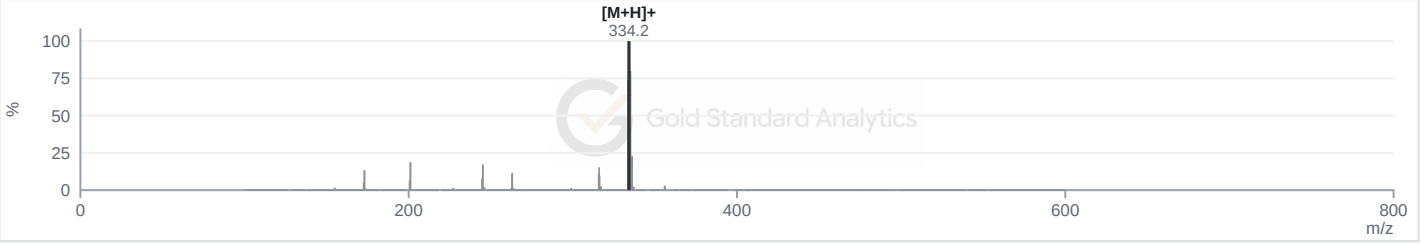
HPLC CHROMATOGRAM

HPLC chromatogram (UV, 214 nm) · mAU, 214 nm against Retention time (min)



MASS SPECTRUM

Mass spectrum of the main peak (1.93 min) · Counts against m/z



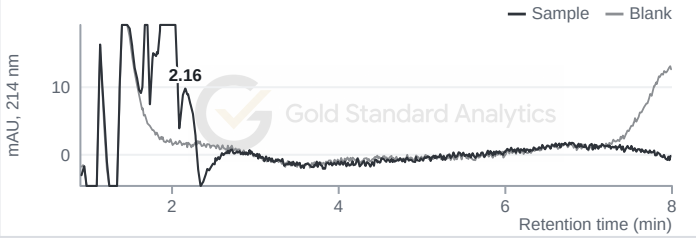
Results

Identity	**Consistent with Cartalax (Ala-Glu-Asp).** The main peak at 1.93 min carries its ion at m/z 334.2 ([M+H]+); molecular mass 333.1 (expected 333.1).
Purity	**96.5 %** by HPLC with UV detection at 214 nm (share of the total peak area); mean of two injections of the same solution (96.4 % and 96.6 %). One impurity was found, listed below. The vial also contains a sugar alcohol such as mannitol (a common vial filler), seen by mass near the start of the run; it is not a peptide and is not counted.
Bacterial endotoxins	**< 0.050 EU/mL; spike recovery 112%** . Pass.
Sterility	**No growth in either canister after 14 days** . Pass.
Elemental impurities (USP <232>)	**Pb < 0.5 µg/g; Cd < 0.2 µg/g; Hg < 0.3 µg/g; As < 1.5 µg/g; Co < 0.5 µg/g; V < 1 µg/g; Ni < 2 µg/g (Agilent ICP-MS)** . Pass.

Zoomed views

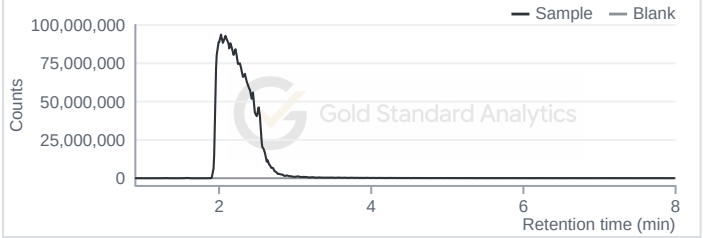
HPLC, SMALL PEAKS

Zoomed in on the small peaks (5 % of the main peak) · mAU, 214 nm against Retention time (min)



ION TRACE

Ion trace, m/z 334.1 (Cartalax [M+H]+): sample vs blank · Counts against Retention time (min)



Impurities

Every peak other than Cartalax that was counted (mean of two injections):

PEAK (MIN)	AMOUNT	WHAT IT IS
2.16	3.5 %	A separate form of Cartalax with the same mass (an isomer, for example with the aspartic acid linked differently); its exact structure is unknown.

> Amounts are each peak's share of the total UV peak area at 214 nm.

How it was tested

Liquid chromatography with UV and mass-spectrometry detection: Agilent 1290 Infinity II LC with a 6490 triple-quadrupole mass spectrometer. Column Polaris C18-A, 2.0 x 150 mm, 35 °C; water and acetonitrile, each with 0.1 % formic acid. Purity: UV peak area at 214 nm after subtracting a blank run of the same sequence. Identity: molecular mass from the mass spectrum. Bacterial endotoxins: endotoxin reader, 0.050 EU/mL limit; result reported as printed by the reader, with spike recovery. Sterility: membrane filtration (canisters), 14-day incubation. Elemental impurities (USP <232>): Agilent ICP-MS; Pb, Cd, Hg, As, Co, V, Ni.

Notes

Results apply only to the sample as received and tested. The test solution was injected about 3 days after it was prepared (kept in the cooled autosampler); peptides can change slowly in solution, so a freshly prepared solution may read slightly higher.

Release

This report is signed electronically at release. The signature is printed on page 1, and the release record, added as the last page, gives the date and the verification code.

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Release record

Report GSA-COA-CUST-LA-2218CART-20261109-5 · Certificate GSA-2026-815204

Customer and order	LA Peptides · Custom sample (no order)
Sample and report	LA2218-CART · Cartalax (Ala-Glu-Asp) Certificate of Analysis
Report reference	GSA-COA-CUST-LA-2218CART-20261109-5
Certificate accession	GSA-2026-815204
Released and signed by	Ian Ebert, Laboratory Director
Date and time (UTC)	2026-11-19 20:37:19Z
Signature meaning	Approved for release. The signer reviewed this report and approved its release to its customer.
Approval reference	bef71049-8c58-4edc-a751-35ac41d2d9c1
Electronic signature	Signed electronically in a signed-in GSA staff account.
Original report SHA-256	c2b0c670e4788e9ba89b6ed72047f2246f27c0e182a7aaaa6f63a6b8cf503435
Verify this certificate	https://goldstandardanalytics.com/coa/GSA-2026-815204

Scan to view this certificate online

Signature

Ian Ebert, Laboratory Director

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