

LRA™ (Lipid Removal Agent)

Description

LRA media is a synthetic calcium silicate hydrate developed for the selective removal of lipids in the production of biopharmaceuticals. LRA media is highly specific for lipids, lipopolysaccharides (endotoxins), and lipoproteins in the presence of other biological macromolecules (e.g., albumin, immunoglobulins, and other proteins), and is commonly used for the removal of contaminating lipids and macromolecules containing lipid moieties from biopharmaceutical process streams, or lipid depletion analytical assays.

LRA media's affinity is thought to be specific to lipids; however, LRA is a unique adsorbent that could potentially be used for other applications. For example, recent data suggests that LRA media is also highly specific for genomic DNA in process scale biopharmaceutical applications.

Specifications

Lipid Binding Index (mg/g):	≥ 55
Moisture (% H ₂ O as shipped):	5.5
Appearance:	Fine powder
Brightness test (% reflectance):	70-90
Water adsorption – wet endpoint (%):	500-650%
Screen analysis - +325 mesh (%):	6.0
Loose weight (g/L):	87.0
Specific gravity:	2.4
Refractive index:	1.55
Surface area (m ² /g):	120.0
pH of 10% slurry:	8.4-10.2
SiO ₂ (%):	≥ 45.0
CaO (%):	≥ 4.0
SiO ₂ / CaO (%):	1.3-20.0
Lead (ppm):	≤ 10
Heavy metals (ppm):	≤ 20
Ignition loss (ppm):	≤ 20
Flouride (ppm):	≤ 10

Pressure Flow Curves

LRA media generates acceptable differential pressures at moderately high flux rates. A bed height of 1 cm generates differential pressures at 25 psi at a flux rate of 2400 LMH (240 cm/hr. linear velocity). When the bed height is increased to 4 cm, the maximum flow rate of 600 LMH (60 cm/hr. linear velocity) for the same differential pressure. The linear relationship between pressure and bed height must be considered when designing a process using LRA media.

Ordering Information

Description	Cat. No.
Lipid Removal Agent (LRA), 100 g	13358-U
Lipid Removal Agent (LRA), 500 g	13360-U

For More Information

Customers using LRA Media in cGMP production of biopharmaceutical and other high purity products can request an LRA Regulatory Support Package¹ through Supelco Technical Service. This support package contains detailed information regarding LRA manufacturing and quality control procedures/specifications.

NOTE that although LRA is currently available in bulk packing, LRA media can also be made available in common LPLC hardware such as SPE tubes, flash columns, Büchner funnels, etc.

Supelco Technical Service

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