

Cleanascite™

Lipid adsorption and clarification reagent

- A high binding capacity for lipids with minimal cross-reactivity with proteins
- Effectively replaces chlorinated/fluorinated hydrocarbons (eg. freon) and it is environmentally friendly.
- Helps purify antibodies, recombinant proteins, nucleic acids, proteoglycans
- Ideal for clarifying ascites, serum, cell & tissue culture, bile and organ homogenates
- Clarifies saliva and fecal components
- Very low protein binding
- Does not bind to DNA, RNA, enzymes and proteins
- Leaves glycoproteins, antibodies, nucleic acids, hemoglobin, proteoglycans, nucleic acids, serum components (such as hormones, nutrients, globulins, clotting factors, transport proteins) alone
- Extends the life of membrane and chromatographic columns.
- Enrichment of delipidated tissue samples
- Ideal for delipidation treatments for downstream processing of large-scale therapeutic proteins, enzymes and monoclonal antibodies.

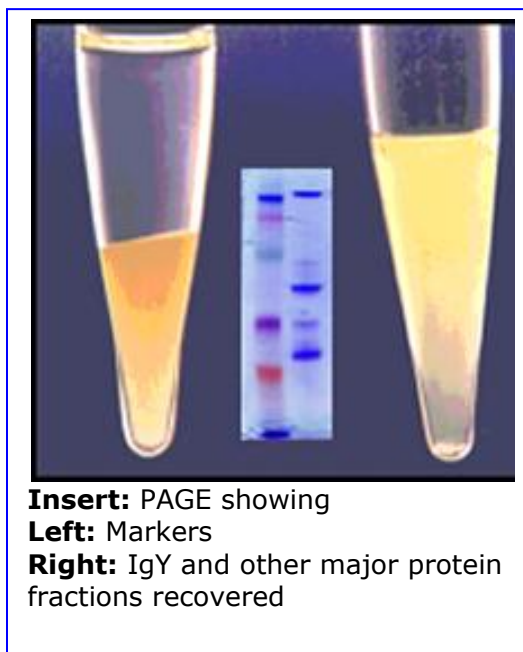
Cleanascite™ selectively removes lipids, cell debris, lipoproteins, floating fats, impurities from Cohn paste, transgenic milk, egg yolk and biological samples for pretreatment of samples prior to purification. The reagent is a solid-phase, non-ionic adsorbent supplied as a suspension in saline, ready for use. Simply add, centrifuge and/or filter. The clarified supernatant is ready for subsequent downstream processing or analysis.

Clarifies

- Ascites⁵
- Serum/Plasma²
- Bile⁷
- Cohn Paste
- Cell Lysates³
- Tissue Culture⁶
- Organ Homogenates
- Saliva/Sputum⁴
- Egg Yolk
- Transgenic Milk

in the purification and analysis of antibodies, proteins, nucleic acids, proteoglycans, and other macromolecules

Egg Yolk After (Left) and Before (Right) Treatment With Cleanascite™



Insert: PAGE showing
Left: Markers
Right: IgY and other major protein fractions recovered

Product	Size	Total Sample Volume that can be Processed*	Item No.
Cleanascite™	100 ml	400 ml	X2555-100
Cleanascite™	1 Liter	4 Liters	X2555-1000
Cleanascite™	4 Liters	16 Liters	X2555-4000
Cleanascite™	16 Liters	64 Liters	X2555-16000

*Based on Cleanascite™ to Sample typical volume ratio. Volume ratio may be adjusted according to lipid levels.

Protocol

Supplied as an aqueous suspension of non-ionic adsorbent in saline, pH 8.0. When not in use, keep sealed. For best results store at 4°C. Do not freeze. Cleanascite™ retains full activity when stored as directed for at least 6 months.

SAMPLE TYPE (partial list)	Volume Ratio, Cleanascite™ : Sample
General	1 : 5 to 1 : 2
Ascites Fluid	1 : 4
Serum	1 : 4
E. Coli lysate	1 : 5
Tissue homogenates	1 : 4 to 1 : 2
Transgenic Milk	1 : 1

Actual lipid concentration in biological samples can vary greatly, so the ratios shown are only intended to provide general guidance in use.

1. Resuspend Cleanascite™ by gently shaking. Excessive shaking or mixing will cause foaming. It should be completely resuspended prior to use.
2. Add 1 ml of Cleanascite™ to 4 ml of the sample. (1 : 4 volume ratio). Mix the sample by gently shaking periodically for 10 minutes. In some cases the agglomeration of fine lipids is improved by incubation at 4°C for a minimum of one hour.
3. Centrifuge sample at 16,000 G's for 1 minute - or - 1,000 G's for 15 minutes.
4. Decant supernatant containing macromolecules of interest and continue with purification.

Optimization. Different sample volumes are easily scaled. Volume ratio can be adjusted up or down as required to remove the amount of impurities present. **In some cases the agglomeration of fine lipids is improved by incubation at 4°C for a minimum of one hour.**

References

Bile

Hauser-Davis RA, Lima AA, Ziolli RL, Campos RC. [First-time report of metalloproteinases in fish bile and their potential as bioindicators regarding environmental contamination](#). Aquatic Toxicology.2012;110-111:99-106

Farina A, Dumonceau JM, Frossard JL. [Proteomic Analysis of Human Bile from Malignant Biliary Stenosis Induced by Pancreatic Cancer](#) Journal of Proteome Research.2009; 8(1):159-69

Guerrier L, Claverol S, Finzi L et al. [Contribution of solid-phase hexapeptide ligand libraries to the repertoire of human bile proteins](#). Journal of Chromatography.2007;1176(1-2):192-205

Chen Bo, Zheng Jian-wei, Wang Jian-ming, et al. [Establishment and preliminary analysis of a 2-D human biliary map](#) Chinese Journal of Hepatobiliary Surgery.2007

Chen B, Dong JQ, Chen YJ et al [Two-dimensional electrophoresis for comparative proteomic analysis of human bile](#). Hepatobiliary & pancreatic diseases international.2007 Aug;6(4):402-6

Guerrier L, Claverol S, Finzi L et al [Contribution of solid-phase hexapeptide ligand libraries to the repertoire of human bile proteins](#).Journal of Chromatography A.2007;1176(1-2):192-205

Kristiansen TZ, Bunkenborg J, Gronborg M et al [A Proteomic Analysis of Human Bile](#) Molecular and Cellular Proteomics.2004;3:715-728

Organ Homogenates

Myerson, J., He, L., Lanza, G., Tollefsen, D. and Wickline, S. [Thrombin-inhibiting perfluorocarbon nanoparticles provide a novel strategy for the treatment and magnetic resonance imaging of acute thrombosis](#). Journal of Thrombosis and Haemostasis.2011;9:1292-1300

Red Blood Cells

Antunes RF; Brandao C; Maia M; Arosa FA. [Red blood cells release factors with growth and survival bioactivities for normal and leukemic T cells](#). Immunology and Cell Biology.2011;89(1):111-21

Tracheal Swab Samples

Li D, Wang J, Wang R, Li Y. [A nanobeads amplified QCM immunosensor for the detection of avian influenza virus H5N1](#), Biosensors and Bioelectronics.2011;26(S10):4146-4154

Fu LM, Shinnick TM. [Genome-wide exploration of the drug action of capreomycin on Mycobacterium tuberculosis using Affymetrix oligonucleotide GeneChips](#) Journal of Infection.2007;54(S3):277-284

Fu LM, Shinnick TM. [Genome-wide analysis of intergenic regions of mycobacterium tuberculosis H37Rv using affymetrix genechips](#). EURASIP journal on bioinformatics & systems biology.2007:23054

Tissue and Cell Culture

Alhamdani MS, Schroder C, Hoheisel JD. [Analysis conditions for proteomic profiling of mammalian tissue and cell extracts with antibody microarrays](#). Proteomics.2010;10(17):3203-7

Czambel RK, Kharlamov A, Jones SC. [Variations of brain endothelial nitric oxide synthase concentration in rat and mouse cortex](#).Nitric Oxide.2010;22(S1): 51-57

Plasma/Serum

Lijowski M, Caruthers S, Hu G. [High-Resolution SPECT-CT/MR Molecular Imaging of Angiogenesis in the Vx2 Model](#) Investigative Radiology.2009;44(1): 15-22

Turner JD, Langley RS, Johnston KL. [Wolbachia Lipoprotein Stimulates Innate and Adaptive Immunity through Toll-like Receptors 2 and 6 to Induce Disease Manifestations of Filariasis](#) The Journal of Biological Chemistry.2009;284:22364-22378

Torrelles JB, DesJardin LE, MacNeil J. et al [Inactivation of Mycobacterium tuberculosis mannosyltransferase pimB reduces the cell wall lipoarabinomannan and lipomannan content and increases the rate of bacterial-induced human macrophage cell death](#) Glycobiology.2009;19(7):743-755

Cho N, Chueh PJ, Kim C et al [Monoclonal antibody to a cancer-specific and drug-responsive hydroquinone \(NADH\) oxidase from the sera of cancer patients](#). Cancer Immunology, Immunotherapy. 2002;51(3):121-9

Shapiro S, Beenhouwer DO, Feldmesser M et al. [Immunoglobulin G Monoclonal Antibodies to Cryptococcus neoformans Protect Mice Deficient in Complement Component C3 Infect](#). Infection and immunity.2002;70(5):2598-604

Castro AR, Morrill We, Pope V. [Lipid Removal from Human Serum Samples](#) Clinical and diagnostic laboratory immunology.2000;7(2):197-199

Nussbaum G, Cleare W, Casadevall A et al [Epitope Location in the Cryptococcus neoformans Capsule Is a Determinant of Antibody Efficacy](#) The Journal of experimental medicine.1997;185:685-694

Organ Homogenates

Thakuria D, Schmidt O, Liliensiek AK. [Field preservation and DNA extraction methods for intestinal microbial diversity analysis in earthworms](#). Journal of Microbiological Methods.2009;76(3):226-33

Cheng AM, Moore EE, Masuno T et al [Normal Mesenteric Lymph Blunts the Pulmonary Inflammatory Response to Endotoxin](#). Journal of Surgical Research.2006;136(S2):166-171

McNally T, Mackie IJ, Machin SJ et al. [Increased levels of beta 2 glycoprotein I antigen and beta 2 glycoprotein I binding antibodies are associated with a history of thromboembolic complications in patients with SLE and primary antiphospholipid syndrome](#) British journal of rheumatology.1995 Nov;34(11):1031-6

Saliva

Garton NJ, Waddell SJ, Sherratt AI et al. [Cytological and Transcript Analyses Reveal Fat and Lazy Persister-Like Bacilli in Tuberculous Sputum](#).PLoS medicine.5(4): e75

Lucy E. DesJardin [Isolation of M. tuberculosis RNA from Sputum](#) Methods in Molecular Medicine.2001;48:133-139

Beenhouwer DO, Shapiro S, Feldmesser M et al. [Both Th1 and Th2 Cytokines Affect the Ability of Monoclonal Antibodies To Protect Mice against Cryptococcus neoformans](#)Infection and immunity.2001;69: 6445-6455

Desjardin LE, Perkins MD, Wolski K et al. [Measurement of Sputum Mycobacterium tuberculosis Messenger RNA as a Surrogate for Response to Chemotherapy](#) American journal of respiratory and critical care medicine.1999;160(1):203-10

[Template Preparation](#) Production Sequencing Protocols. Stanford Genome Technology Center

Patents

Iwakura Yoichiro, Kakuta Shigeru, Suzuki, Shunsuke - United States Patent Application 20130011413. [Method and Pharmaceutical Composition for Treatment of Intestinal Disease](#)

Mcintyre, John A. United States Patent: 20120107841. [Serum Diagnostic Method, Biomarker and Kit for Early Detection and Staging of Alzheimer's Disease](#)

Morre, James D et al. United States Patent: 20030170757. [Monoclonal antibodies specific for neoplasia-specific NADH: disulfide reductase](#)

DJ Morre, NM McCarty, D Morre et al United States Patent: 7053188. [Monoclonal antibodies specific for neoplasia-specific NADH: disulfide reductase](#)

David C. Jones. United States Patent: 7999084. [Devices and methods for reducing matrix effects](#)

J Krupey - United States Patent: 5885921 [Hydrophobic silica adsorbents for lipids](#)

Vaccine Research (Cholesterol Removal From Human Serum)

Kamtchoua, Thierry, Monica Bologna, Robert Hopfer, David Neveu, Branda Hu, Xiaohua Sheng, Nicolas Corde, Catherine Pouzet, Gloria Zimmerman, and Sanjay Gurunathan. [Safety and immunogenicity of the pneumococcal pneumolysin derivative PlyD1 in a single-antigen protein vaccine candidate in adults](#).Vaccine (2012).
