

ULTRASMALL MIXED FERRITE IRON OXIDE CONTRAST AGENTS

Molday LION™ **Rhodamine B** is an ultrasmall mixed ferrite iron oxide-based superparamagnetic contrast reagent having a colloidal size of 35 nm. The core crystal is europium-doped magnetite surrounded by a cross-linked dextran to which a fluorescent dye, rhodamine B, is attached through a C6 amino group. This agent can be visualized by MRI and fluorescence, and can be quantified by neutron activation *via* BioPAL's short enhanced assay service. For MRI, this agent is classified as a darkening agent acting through the T2 relaxation process. For fluorescence, the rhodamine B label excitation wavelength is 555 nm and the emission is at 565-620nm.

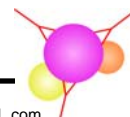
In addition to rhodamine B, alternative fluorescent dyes can be conjugated to CL-50KQ02-6A and we are pleased to discuss alternative conjugation procedures.

NOT FOR HUMAN USE.

Fluorescent Magnetite MRI Contrast Agent

Catalog Number

CL-50KQ02-6A	Molday LION\$ 450.00 2.0 ml of a 35 nm mixed ferrite iron oxide contrast agent containing europium having a positive surface packaged in a 2 ml sealed serum bottle. 1 mg Fe/ml. Applications: MRI, EM, Fluorescent detection, Neutron activation, Magnetic cell-sorting.
CL-50KQ02-6A-50	Molday LION Rhodamine B\$ 450.00 2.0 ml of a 35 nm rhodamine B mixed ferrite iron oxide contrast agent packaged in a 2 ml sealed serum bottle. 1 mg Fe/ml. Applications: MRI, EM, Fluorescent detection, Neutron activation, Magnetic cell-sorting. REF: <i>Bioconjugate Chemistry</i> 2007:18;1763-1771.



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BioPAL's polypropylene sample vials have been cleaned to remove sodium contamination as well as other trace elements and are calibrated for our automated activation and counting system. These vials are designed to contain biological samples, such as tissue and blood, during neutron activation. Customers **MUST** use these sample vials for BioPAL's neutron activation assay service.

Contaminant Free, Sample Vials

Catalog
Number

V-0MS01	100 Polypropylene tissue-sample vials (2 ml) \$ 50.00 per pk 2 ml sample vials are ideal for small animal models, such as mice, rats, and rabbits. Each vial holds up to 3 grams of wet tissue.
V-0MS02	100 Polypropylene tissue-sample vials (4 ml) \$ 60.00 per pk 4 ml sample vials are ideal for large animal models. Each vial holds up to 5 grams of wet tissue.
V-0MS03	10 Polypropylene blood-sample vials (20 ml) \$ 20.00 per pk Blood-sample vials come with labeled, zip-lock bags for shipping.



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Neutron activation analysis provides the life science community with capabilities not readily available with other assay technologies. Neutron activation is known for its excellent sensitivity and elemental specificity for the simultaneous measurement of trace elements. This offers the potential of measuring multiple isotopic tracers per assay. Unlike optical lasers, neutrons can penetrate solid tissue and opaque-liquid samples, thereby providing an assay that is completely self-contained requiring minimal sample preparation. Unlike other element detection methods, such as MR imaging or atomic absorption spectrophotometry, stable-isotope labeling and neutron activation can measure multiple labels simultaneously. Therefore, samples can be archived and re-assayed if questions arise.

BioPAL offers several different stable-isotope labeled products that can be simultaneously assayed by neutron activation. Researchers use these products in an analogous fashion to their radioactive and optically based counterparts. When the experiment is completed, only the samples-of-interest are sent to BioPAL for analysis of tracer(s) content and the results of the assay are returned to the researcher within a few days. BioPAL's report sheet provides the customer with the number of disintegrations per minute (dpm) measured for each labeled measured in each sample, which is analogous to the traditional radioactive method.

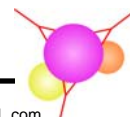
Assay Service

BioPAL offers three assay services: 1) The standard service, 2) Short enhanced service, and the 3) Long enhanced service, which the enhanced services provide approximately 100x increased sensitivity. Researchers will need to evaluate the limits of sensitivity for their unique application. The results of both assay services are reported as the total disintegrations per minute (dpm) measured in each sample for each corresponding label.

Catalog

Number

A-0MS01	Standard Assay Fee for 2 ml and 4 ml sample vials	\$ 11.00 per sample
A-0MS05a	Short Enhanced Assay Fee for 2 ml and 4 ml sample vials Europium and dysprosium labels only. Must discuss your protocol with BioPAL first.	\$ 25.00 per sample
A-0MS05	Long Enhanced Assay Fee for 2 ml and 4 ml sample vials All other labels. Must discuss your protocol with BioPAL first.	\$ 50.00 per sample
A-0MS02	Standard Assay Fee for 20 ml blood sample.....	\$ 25.00 per sample
A-0MS04	Assay Fee for 20 ml vial containing tissue Europium and dysprosium labels only. Must discuss your protocol with BioPAL first.	\$ 50.00 per sample
A-0MS06a	Short Enhanced Assay Fee for 20 ml sample vials The fee is for both tissue and blood samples. Europium and dysprosium labels only. Must discuss your protocol with BioPAL first.	\$100.00 per sample
A-0MS06	Long Enhanced Assay Fee for 20 ml sample vials..... The fee is for both tissue and blood samples. All other labels. Must discuss your protocol with BioPAL first.	\$175.00 per sample



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SansSaLine™ is designed as a saline substitute for preparing samples for neutron activation analysis, thereby increasing assay sensitivity following neutron activation. SansSaLine may be useful for washing cells and tissues and may be combined with *in vivo* histochemical staining techniques.

SansSaLine is isotonic and has been used in the incubation of hepatocytes with no loss of viability. SansSaLine contains lithium, a potential teratogen and should be handled with normal laboratory precautions.

Important - **Research use only. NOT FOR HUMAN USE**

Catalog Number

R-7000	SansSaLine	\$ 29.00
	A 100 mL vial. Each autoclaved glass vial has an easy-to-use pull-cap and is suitable to retro-perfuse a 200 g organ.	
R-7006	A six-pack of SansSaLine	\$ 150.00
	A package of six 100 mL vials.	
R-7010	SansSaLine concentrate	\$ 175.00
	A 100 mL vial containing a 10x concentrated solution. Each glass vial has an easy-to-use pull-cap and can make a 1 liter solution of SansSaLine.	
R-7016	A six-pack of SansSaLine concentrate	\$ 750.00
	A package of six 100 mL vials, each containing a 10x concentrated solution.	

Testimonials:

*Ah, make the most of what we yet may spend,
Before we too into the Dust descend;
Dust into Dust, and under Dust, to lie,
Sans Wine, sans Song, sans Singer, and sansSaLine.*

*...Last scene of all,
That ends this strange eventful history,
Is second childishness, and mere oblivion,
Sans teeth, sans eyes, sans taste, sansSaLine.*

Our humble apologies to Omar Khayyam "The Rubaiyat" and William Shakespeare "As You Like It".

