

NEUTRON ACTIVATION SERVICE

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. Given additional information provided by the customer, BioPAL will also calculate the blood flow (ml/min/g) or other physiological parameters for each tissue sample.

Assay Service

BioPAL offers two assay services. The first service is a basic microsphere measurement. This assay measures the total microsphere activity found in each sample. The results are reported as the total disintegrations per minute (dpm) measured in each sample for each corresponding microsphere label.

Catalog Number

A-0MS01	Assay Fee for 2 ml and 4 ml sample vials.....	\$ 13.00 per sample
A-0MS03	Assay Fee for 20 ml blood sample vials.....	\$ 25.00 per sample
A-0MS04	Assay Fee for 20 ml vial containing tissue	\$ 50.00 per sample

Note: Sample should be shipped dry. When necessary, a drying fee of \$1.00 per sample will be added to the bill and will appear in the handling charge.

The second assay service is more comprehensive and therefore the user is charged an additional service fee. This service can only be applied to 15 μ m and 10 μ m labeled microspheres. This assay provides the total microsphere activity measurement (dpm) and provides calculated blood flow results (ml/min/g) for each label used. For this assay, the user must provide tissue mass and the blood withdrawal information listed on our ASSAY REQUEST FORM.

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A-0MS04	Assay Fee for 20 ml vial containing tissue	\$ 50.00 per sample
A-0MS02	Blood flow calculation for each experimental subject.....	\$ 50.00 per subject

The results of the assay will be available within ten working days from the date of receipt.

