

Glutathione-Coupled Yttrium Silicate (YSi) SPA Beads

Product Number: RPNQ0033 (50 mg)

Warning

For research use only.
Not recommended or intended for diagnosis of disease in humans or animals.
Do not use internally or externally in humans or animals.

Storage

These glutathione coupled yttrium silicate SPA beads are supplied lyophilized containing 50 mg total per vial. This material should be stored protected from light at 2-8°C.

Expiration

Once Reconstituted, the beads are stable for up to 7 days when stored in the appropriate conditions.

Safety Warnings and Precautions

All chemicals should be considered as potentially hazardous. We therefore recommend that this product is handled only by those persons who have been trained in laboratory techniques and that it is used in accordance with the principles of good laboratory practice. Wear suitable protective clothing such as laboratory overalls, safety glasses and gloves. Care should be taken to avoid contact with skin or eyes. In the case of contact with skin or eyes wash immediately with water. See material safety data sheet(s) and/or safety statement(s) for specific advice.

CAUTION: For use with radioactive material.

This product is to be used with radioactive material. Please follow the manufacturer's instructions relating to the handling, use, storage, and disposal of such material.

Quality Control

Each batch of glutathione coupled yttrium silicate SPA beads is tested for the relative binding capacity of [³H] n-succinimidyl propionyl-GST ([³H]NSP-GST).

BEAD RECONSTITUTION

Before use the SPA beads should be reconstituted in a buffer appropriate for the particular assay to be performed. The SPA beads should be mixed to ensure a homogeneous suspension while pipetting. This may be done by continuous agitation with a magnetic stirrer. Reconstituted beads can usually be stored at 2-8°C for up to seven days. **DO NOT FREEZE.**

PLEASE NOTE: Anti-microbial agents are not included in this reagent. The user should therefore be aware that microbial contamination may occur when the reconstituted beads are stored for prolonged periods (>2 weeks), or are wrongly stored. If anti-microbial agents (eg sodium azide) are added on storage, then it remains the responsibility of the user to evaluate the effects of the added agent on the assay.

Avoid exposure of the glutathione coated beads and finished assays to halogen light. Exposure of the glutathione coated beads to halogen light can cause elevated counts due to phosphorescence. If elevated counts due to light exposure are observed, place the assay in the dark for a minimum of four hours before counting.

ASSAY CONDITIONS

The binding of radiolabelled [³H]NSP-GST brings the isotope into close proximity with the scintillant which is incorporated within the bead. This allows the emitted radiation (beta-particles) to stimulate the scintillant to emit light. Any unbound radiolabelled ligand is not in close enough proximity to the scintillant to allow such energy transfer and hence no signal is generated. Light emitted by stimulated SPA beads can be detected by either conventional scintillation counters or multidetector instruments. Other isotopes, such as [³³P] or [¹²⁵I], may be used in SPA format. It remains the responsibility of the user to optimize the amount of SPA bead required and the incubation time required for each assay. To achieve optimal counts, excess bead should be present in order to capture all of the activity present in the assay tube. Samples which are colored may require color quench correction.

COUNTER SETTINGS

It is essential that the following counter settings are used for SPA in Yttrium Silicate-based assays

Packard TopCount™ window settings

3H Region A = 0.00 - 50.00 Region B = 0.00 - 256.0

125I Region A = 0.00 - 100.0 Region B = 0.00 - 256.0

Window settings for alternative isotopes can be determined using the 'REGION REVIEW' facility.

For Version 4 software (or higher)

Settings for 3H and 125I are preinstalled in the nucleide library as

3H-YSi-SPA and 125I-YSi-SPA.

ScintillatorGlass

Energy RangeLow

Efficiency modeHi Sen

Wallac MicroBeta™ window settings

3H 5 - 500

125I 5 - 560

Window settings for alternative isotopes can be determined printing the pulse-height spectrum (PRINT 'SPECTRA') for the isotope of interest

The information provided in this document is valid for the specified lot number and date of analysis. This information is for reference purposes only and does not constitute a warranty or guarantee of the product's suitability for any specific use. Revvity, Inc., its subsidiaries, and/or affiliates (collectively, "Revvity") do not assume any liability for any errors or damages arising from the use of this document or the product described herein. REVVITY EXPRESSLY DISCLAIMS ALL WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, REGARDLESS OF WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED, ALLEGEDLY ARISING FROM ANY USAGE OF ANY TRADE OR ANY COURSE OF DEALING, IN CONNECTION WITH THE USE OF INFORMATION CONTAINED HEREIN OR THE PRODUCT ITSELF.
RPNQ0033-R Rev01

