



Liquid Scintillation Counter Purchasing Guide: GMI Certified Knowledge

Achieving accurate quantitative results in applications that may involve protection of the lab environment, discovery of new drugs, production of energies, and more can be done through radiation detection. Choosing the right LS Counter for the application leads to optimal measurement of different radiation types, obtaining quality samples and test data as well as improving laboratory productivity. Whether for use in alpha and beta particle detection or major luminescence, physics, environmental, and radiochemical applications, it is essential to work with highly sensitive and stable liquid scintillation counters that you can put your confidence in.

Ensure optimum counting of radionuclide activity for your specific analyses by finding the most suitable Liquid Scintillation Counting (LSC) system. Here is a simple guide that GMI has put together to help you pick the most valuable and flexible laboratory counting instrument for radioactive material sample activity in your application.

Review application demands and needs.

As an initial step in selecting the right LSC system for your laboratory, it is advised to review your application requirements first and answer some of these questions:

- Are you looking for an instrument to be used in basic research, demanding Disintegrations Per Minute (DPM) counting, applications dealing with low-level detection of radioactivity, or multi-user labs that carry out routine counting?
- Does your research require traditional vial-based analyzers or microplate-based ones?
- Also consider the samples that you will be testing and quantifying, are you working on alpha and beta radiations only or does your application require detection of gamma and x-ray radiations as well?

Listing and answering these questions beforehand makes you see through possible enhancements, features, configurations or upgrades that you should also consider before procuring a scintillation system.

If you are looking for an affordable and powerful tool for basic research and Counts Per Minute (CPM) or direct DPM applications, you can explore models with an easy-to-use interface for data management, multi-tasking, security and networking. A system that offers live display and plotting, assists in minimizing counting errors and generates automatic and easy-to-read reports can be an option for you.



Meet demanding DPM and environmental applications with an LSC system that has expandable capabilities for environmental analysis. Look for instruments that may have ultralow-level and alpha/beta discrimination features as well as additional options such as 2D barcode readers, color-corrected single and dual-label DPM, and many user protocols with unlimited assays available.

Multi-user labs performing routine counting for research can also get a liquid scintillation counter with a high-sensitivity count mode for reduced radiation backgrounds. You can choose a model that offers replay sample recall and reprocessing without counting, triple-label DPM for counting, and allows many user protocols with unlimited assays.

Sticking to vial-based counting for various radiation types? You can check out GMI's range of high-performing Beckman Coulter liquid scintillation counters including the [LS6500](#) and the [LS6000](#).

Do you prefer plate-based counting for radiometric and luminescence applications? GMI carries LSC models including those from Packard as well as the PE [1450 Microbeta](#) and [2450 Microbeta2](#) designed to directly count a range of radiation samples from microplates and microtiter plates. Some features that come with these equipment include Time Resolved Liquid Scintillation Counting (TR-LSC) Technology, multi-user programs, high-resolution spectralyzer memory, choice of single- or dual-channel injectors, and more.

Decide on and establish budget.

Check on your research and laboratory funding and decide if you are willing to spend a considerable amount for a new liquid scintillation counter or if you are leaning more to one of the popular options nowadays, buying used or fully restored to factory specifications LSC system. With Original Equipment Manufacturers (OEMs) having tight schedules in supplying new lab instruments, you might want to look at economical and quickly available used liquid scintillation counters to meet market demands or for urgent unit replacement needs. Purchasing quality, certified pre-owned lab equipment from trusted and industry-leading distributors can save up to 70% of your budget.

Consider lab space and lab instrument sizes.

When choosing a liquid scintillation counter, be also wary of your laboratory space. If you have a modest lab area, consider getting benchtop LSC systems or a unit that is functional even without an external computer. For those with a spacious benchtop space, you can opt for fully integrated, with enhancement packs, and expandable models.



Take into account instrument capacities and throughputs.

Before purchasing a unit, take into consideration the total throughput or the maximum possible amount of data you expect the liquid scintillation counter to process per day. This will help determine the capacity of the instrument that you should be getting.

You can select a unit that allows mixing of standard vials, mini-vials, or a combination of both. You can also opt for models that allow counting of radio-isotopic and luminescent samples from:

- 16-well microplates
- 24-well microplates
- 96-well microplates
- 384-well microplates

Improve laboratory efficiency by finding an LSC system that perfectly fits your analyses and assay types. Weigh in the pros and cons of each eligible liquid scintillation counting equipment, keeping in mind possible upgrades in the future. If you are having trouble in selecting the right equipment for your application, you can always get effective solutions and advice from industry experts like GMI. Aside from managing your old counters, trust us to provide total solutions for liquid scintillation counter sales and support. Together with our partner, Meridian Biotechnologies who have been in the business for more than 35 years and who used to make cocktails for Packard and Perkin-Elmer, we deliver reliable application support as well as quality LS consumables.

Browse our extensive portfolio of [new](#) and [used](#) liquid scintillation counters recommended for cellular research, radiation safety/health physics, ADME studies, and life science research including:

- Biochemistry
- Molecular Biology
- Metabolism
- Genomics
- Proteomics

We carry high resolution vial-based and plate-based counting systems for a range of radiations, covering even low-active and low-volume radioactive samples.

Check out GMI's catalog of superior performance and easy-to-operate new scintillation counters for assays of your radioactive materials, research purposes, and secured radiation protection. We are an exclusive distributor of the [Hitachi AccuFLEX LSC-8000](#) that can process 408 samples and that allows for 50 multi-user programs. The model is also built with enhanced features such as chemical luminescence and color quenching corrections, efficiency tracing method, sample error checking monitor, anti-static and alpha/beta separation functions. We also showcase the [Hitachi AccuFLEX LSC-LB7](#) with the highest level detection performance and highest resolution level in tritium measurement. The unit also supports External Standard



Channel Ratio (ESCR), Self Constant Channel Ration (SCCR), and Efficiency Tracing (ETM) methods.

Save budget, time, consumables, and waste for your LSC screening applications by getting a unit from our list of cost-effective used liquid scintillation counters originally built by popular manufacturers like Perkin-Elmer, Beckman-Coulter, and Wallac. See our product selection here <http://www.gmi-inc.com/used-scintillation-counter.html>.

GMI has been providing highly advanced products and superior services to the scientific market and cost conscious laboratories for 20 years. With an ISO 9001:2008 certification under our wings, you can guarantee that any instrument purchased from us has passed through a meticulous refurbishing, recalibration, recertification, and testing process. We also offer various warranty, rental, and leasing options as well as service agreements for our products.

For any assistance needed on potential new or used liquid scintillation counter purchase, feel free to reach us at **1-888-702-1775** or email us at sschommer@gmi-inc.com.