PLGA (Poly Lactic co-Glycolic Acid) Uniform Dry Microspheres
Catalog Numbers: 25398, 25399, 25400, 25401, 25402, 25403

DESCRIPTION
Poly(lactic-co-glycolic acid) (PLGA) is a common biodegradable polymer that has been utilized in the development of biocompatible devices such as sutures, tissue scaffolds, and drug delivery vehicles, and to generate specific features on biosensor surfaces and within imaging phantoms. Compositions may be engineered to achieve desired degradation or release profiles, and sizes tailored to fit specific applications.

Polysciences offers microspheres comprised of two standard PLGA polymer ratios (50:50 and 75:25 Lactic Acid : Glycolic Acid) in three narrow sizes (75µm, 100µm and 120µm; 5-10% CVs). These highly uniform particle populations serve as excellent models for controlled degradation rate measurements, and for the development of prototype scaffolds or devices. Products are available in packaging sizes of 100mg, 250mg or 500mg.

CHARACTERISTICS
Composition: PLGA copolymer, 50:50 LA GA or 75:25 LA GA
Structure: Amorphous
Density*: 50:50 PLGA – 1.34 g/cm³
75:25 PLGA – 1.30 g/cm³
Glass Transition Temperature*: 50:50 PLGA – 44-55˚C
75:25 PLGA – 50-55˚C
Nominal Diameters: 75µm, 100µm, 120µm

Molecular Weight*: 50:50 PLGA – ~150,000
75:25 PLGA – ~90,000
Concentration: 100%, supplied lyophilized

* As reported in the literature for PLGA compositions.

HANDLING AND USE
PLGA microspheres are inherently hydrophobic, and a small amount of surfactant (e.g. 0.05% SDS) and / or a few seconds in an ultrasonic bath may aid in suspending microspheres in aqueous media.

Though actual biodegradation kinetics will be dependent on the specific environment, e.g. pH, temperature, etc., spheres are expected to fully biodegrade over a period of ~2-4 months in aqueous systems due to the hydrolysis of PLGA ester linkages. Biodegradation is associated with loss in MW and mass, as well as morphological alternations including surface erosion and changes in geometry.

PLGA polymers will dissolve in a variety of organic solvents, e.g. DCM, THF, chloroform, acetone, etc.

STORAGE
Store at 4-8˚C. Protect from moisture. Microspheres may be handled under nitrogen or other inert gas for best stability. Microspheres may be frozen / dessicated for long-term storage.

This product is for research use only and is not intended for use in humans or for in vitro diagnostic use.

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Cat. #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>25401</td>
<td>PLGA Uniform Microspheres, 50:50 LA/GA, 75µm</td>
</tr>
<tr>
<td>25402</td>
<td>PLGA Uniform Microspheres, 50:50 LA/GA, 100µm</td>
</tr>
<tr>
<td>25403</td>
<td>PLGA Uniform Microspheres, 50:50 LA/GA, 120µm</td>
</tr>
<tr>
<td>25398</td>
<td>PLGA Uniform Microspheres, 75:25 LA/GA, 75µm</td>
</tr>
<tr>
<td>25399</td>
<td>PLGA Uniform Microspheres, 75:25 LA/GA, 100µm</td>
</tr>
<tr>
<td>25400</td>
<td>PLGA Uniform Microspheres, 75:25 LA/GA, 120µm</td>
</tr>
</tbody>
</table>

TO ORDER

In The U.S. Call: (800) 523-2575 • (215) 343-6484
In The U.S. Fax: (800) 343-3291 • (215) 343-0214
In Germany Call: +49 06201-845200
In Germany Fax: +49 06201-8452020
In Asia Call: (886) 2 8712 0600
In Asia Fax: (886) 2 8712 2677

Order online anytime at www.polysciences.com

Should any of our materials fail to perform to our specifications, we will be pleased to provide replacements or return the purchase price. We solicit your inquiries concerning all needs for life sciences work. The information given in this bulletin is to the best of our knowledge accurate, but no warranty is expressed or implied. It is the user's responsibility to determine the suitability for their own use of the products described herein, and since conditions of use are beyond our control, we disclaim all liability with respect to the use of any material supplied by us. Nothing contained herein shall be construed as a recommendation to use any product or to practice any process in violation of any law or any government regulation.