



Parker's compact SpinBag Mixing System offers the advantages of single-use in a bench top mixing solution.

Parker's 3D SpinBag bioprocess containers are constructed of durable, particle-free, DuraPure C93 film, each containing a platinum-cured silicone coated magnetic spin bar. When placed on a mixing plate, the spin bar rotates to create a vortex of motion for thorough mixing/stirring of fluid contents. Parker SpinBags are available in a variety of sizes and port configurations to easily integrate within your application.

For a complete SpinBag Mixing System solution, Parker offers both standard and custom SpinBag designs capable of handling volumes from 5L - 50L. Our range of mixers are easy to operate with digital control panels to adjust speed and set temperature accuracy.

Features and Benefits

- Constructed of fully validated film offering added seal strength, low gas permeability and optical clarity which can be heated to 60°C
- Stores flat and ideal for preparation of cell culture media, buffers, bioreactor feeds, and suspension / re-suspension applications
- Easily integrated with filters, sensors and pumping systems
- Available with standard configurations, or can be custom designed upon request
- Platinum-cured silicone coated magnetic stir bar offers optimal mixing performance and eliminates the need to validate another material
- Manufactured in an ISO Class 7 cleanroom

SpinBag Configurations & Sizes

Two standard configurations are available in 5L, 10L, 15L, 20L and 50L sizes.

Upstream SpinBag containers are supplied non-gamma-irradiated or gamma-irradiated and are configured with a 3" TC inlet port for inserting powders and liquids. The bottom outlet port is connected to 12" of 3/8" ID platinum-cured silicone tubing with male non-valved coupling connectors.

Downstream SpinBag containers are supplied non-gamma-irradiated or gamma-irradiated and are configured with two 3/8" inlet (top) and outlet (bottom) ports. Each port is connected to 12" of 3/8" ID platinum-cured silicone tubing with AQQ genderless aseptic connectors. The inlet port includes a diptube to prevent liquid foaming/product denaturation.



SpinBag Mixing System

- Single-use bench top mixing system
- Efficient small volume mixing and stirring



Applications

- Media/Buffer Prep
- Viral Inactivation
- Tangential Flow Filtration Retentate Vessel
- Drug Substance/Drug Product Formulation
- Vaccine Production
- Compound Pharmacy

Options and Accessories

Spin plates are available in two sizes for bags ≤15L and ≥20L and may be compatible with alternate supplier plates.



SpinBag housings are constructed of durable polycarbonate to add stability on spin plates for 15L, 20L or 50L large capacity bags.

The above are sold separately or can be combined as a package. See ordering information for details.

DuraPure C93 Film

5-layer co-extruded film

The 5 co-extruded layers of the 13 mil, (0.325 mm) thick DuraPure C93 film are shown at right. Ultra low density polyethylene is the fluid contact layer, ethylene vinyl alcohol is the gas barrier layer, and low density polyethylene is the outer layer. Together, these layers offer the best combination of strength, flexibility, gas barrier and low extractables.

Fluid Contact Side
ULDPE
TIE
EVOH
TIE
LDPE

Purity

USP Class VI
FDA 21CFR177 materials
NASE, DNASE Testing avail. as service
Gamma and E-Beam
Extractable information provided
Clean room manufacturing

Specifications

Mechanical properties of DuraPure C93 BPC film

- Film thickness: 0.325mm
- Specific gravity: ASTM D-792 0.9 g/cm³
- Film strength:
 - Tensile strength: ASTM D-882 13.5 MPa
 - Elongation: ASTM D-882 290%
 - Elastic modulus: ASTM D-882 360 MPa
- Optical properties:
 - Haze: ASTM D-1003 7%
 - Clarity: ASTM D-1003 97%
 - Transmittance: ASTM D-1003 93%
- Barrier:
 - Water vapor transmission rate: ASTM F-1249 0.33 g / (m²*day)
 - Oxygen permeability: ASTM D-3985 <0.05 cm³ / (m²*day*atm)
 - Carbon dioxide permeability: ASTM F-2476 <0.02 cm³ / (m²*day*atm)

Biocompatibility and physicochemical test results

Test Description	Test Reference	Results for Gamma Irradiated DuraPure C93 Film
Biocompatibility tests		
USP VI for plastic	USP <88>	Pass
Hemolysis test	ISO 10993-4	Pass
Cytotoxicity	USP <87>	Pass
Implantation test	ISO 10993-6	Pass
Irritation & sensitization	ISO 10993-10	Pass
Acute systemic toxicity test	ISO 10993-11	Pass
Physicochemical tests		
Physicochemical test for plastics	USP <661>	Pass
European Pharmacopoeia 3.1.5	EP 5, 2005 chapter 3.1.5	Pass
LAL bacterial endotoxins assay	USP <85>	Report

Summary of extractables results for DuraPure C93 BPC*

	Volatile Extractables	Semi-Volatile & Non-Volatile Extractables	Acetate & Formate
Water	None detected	Stabilizer: 0.5 ppm	Formate: None detected Acetate: 0.7 ppm
PBS, pH 3	Acetaldehyde: 0.15 ppm	- Fatty acid slip agents: 15 ppm <i>e.g. Hexanoic acid at 8 ppm</i> - Polyethylene constituents: 0.8 ppm <i>e.g. 2-Octanone at 0.5 ppm</i> - Stabilizers: 0.3 ppm	Formate: 1.4 ppm Acetate: 7.6 ppm
PBS, pH 10	None detected	- Fatty acid slip agents: 1.1 ppm - Polyethylene constituents: 0.3 ppm - Stabilizers: 1ppm <i>e.g. Irgafos at 0.7 ppm</i>	Formate: 1.8 ppm Acetate: 8.0 ppm
10% Ethanol	Acetaldehyde: 3.0 ppm	- Fatty acid slip agents: 20.5 ppm - Polyethylene constituents: 1.4 ppm - Stabilizers: 1ppm	Formate: 0.2 ppm Acetate: 0.2 ppm

* The data shown is derived from a gamma irradiated, complete bioprocessing system, including representative tubing, connectors and elastomers. Extraction volume: 500 mL. Surface area: 1150 cm². Extractions were conducted under accelerated conditions for 91 days at 40 °C, with water: PBS, pH3; PBS, pH 10; or 10% ethanol, to simulate 2 year exposure. Please note, although values are quantitative, they are meant to be qualitative as a starting point for customer leachables studies. Detailed data and test reports are available upon request. Please contact your local Parker representative.

Ordering Information

SpinBag BioProcess Containers

PHSB			L		
Code Process		Code Liters		Code Irradiation	
D	Downstream	005		GI	Gamma-Irradiated
U	Upstream	010		Blank	Non-Irradiated
		015			
		020			
		050			

Ordering Information - Options & Accessories

Part#	Bag Size	Description
PHSBB015L	≤15L	Spin plate & housing
PHSBB020L	20L	Spin plate & housing
PHSBB050L	50L	Spin plate & housing
PHSBM015L	≤15L	Spin Plate
PHSBM050L	≥20L	Spin Plate
PHSBH015L	≤15L	Housing
PHSBH020L	20L	Housing
PHSBH050L	50L	Housing

Example: PHSBD005LGI = 5L downstream gamma-irradiated SpinBag

For customized bags, please contact your Parker sales representative or email bioscienceNA.sales@parker.com



Parker has a continuous policy of product development and although the Company reserves the right to change specifications, it attempts to keep customers informed of any alterations. This publication is for general information only and customers are requested to contact your local sales representative for detailed information and advice on a products suitability for specific applications. All products are sold subject to the company's Standard conditions of sale.

*Spin plates may be compatible with alternate suppliers, ask your local Parker Rep.