



PRODUCT SHEET

ProSafe⁺ Cocktails

Main Applications

Liquid scintillation counting of aqueous samples, filter samples and samples digested with organic or aqueous solubilizers.

Packing

Order N°.	Description	Packing
ME-COC-PS	ProSafe ⁺ (High performance cocktail)	2 x 5 Liter plastic bottles in a box
ME-COC-PSHC	ProSafe HC ⁺ (High Capacity cocktail)	2 x 5 Liter plastic bottles in a box
ME-COC-PSTS	ProSafeTS ⁺ (Cocktail for Tissue Solubilisers)	2 x 5 Liter plastic bottles in a box
ME-COC-PSFC	ProSafe FC ⁺ (Cocktail for Filter Counting)	2 x 5 Liter plastic bottles in a box
ME-COC-PFG1	ProFlow G ⁺ General purpose flow cocktail	2 x 5 Liter plastic bottles in a box
ME-COC-PFP1	ProFlow P ⁺ Flow cocktail for Phosphate gradients	2 x 5 Liter plastic bottles in a box

Physical and chemical properties

Solvent : DIN

Flash point : 147 °C

Conditions of utilization

Recommended T of utilization: 15 – 20°C

Storage: Dry and dark, T<30°C

TECHNICAL INFORMATION

PROSAFE⁺ COCKTAILS



The ProSafe⁺ range is an improved version of the original ProSafe range. The solvent base has been changed from PXE to DIN and this has necessitated a minor change to the formulations. Overall the changes have produced cocktails with even higher Tritium efficiencies, better sample holding capacities and a guaranteed compatibility with commercially available quench sets. ProSafe⁺ cocktails are high flashpoint, 100% biodegradable, high performance LSC cocktails. They are designed to be in accordance with the EC Directive 2003/53/EEC. ProSafe⁺ cocktails do not contain any Nonyl Phenol Ethoxylates (NPEs) or other Alkyl Phenol Ethoxylates (APEs) which produce endocrine disrupting metabolites upon biodegradation and are thus suitable for drain disposal, depending on

radionuclide content of the counting samples and local radiation protection regulations. Different ProSafe⁺ cocktails are available to cover a wide range of sample type counting.

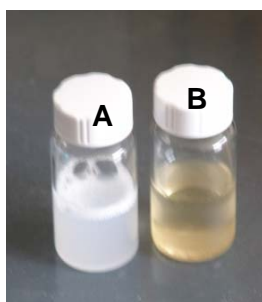


Figure 1:
A - Before biological degradation
B - After biological degradation

ProSafe HC⁺

High capacity cocktail accepting 10 mL of many dilute samples and lesser amounts of more concentrated samples in 10 mL cocktail.

ProSafe⁺

High performance cocktail accepting 4-6 mL of many dilute samples and lesser amounts of more concentrated samples in 10 mL of cocktail.

ProSafe FC⁺

High efficiency cocktail for use with wet and dry filters and lower volume (1 – 2 mL) of aqueous samples.

ProSafe TS⁺

Specialist cocktail for use with solubilized (digested) samples originating from both organic and aqueous solubilizers.

ProFlow G⁺ General Purpose

General purpose, non-gelling, flow cocktail with low viscosity (allowing easy mixing and pumping) for use with dilute eluents and organic/aqueous gradients.

ProFlow P⁺ Phosphate Gradients

General purpose non-gelling flow cocktail with low viscosity (allowing easy mixing and pumping) for use with 0 to 2M ammonium phosphate gradients.

TECHNICAL INFORMATION

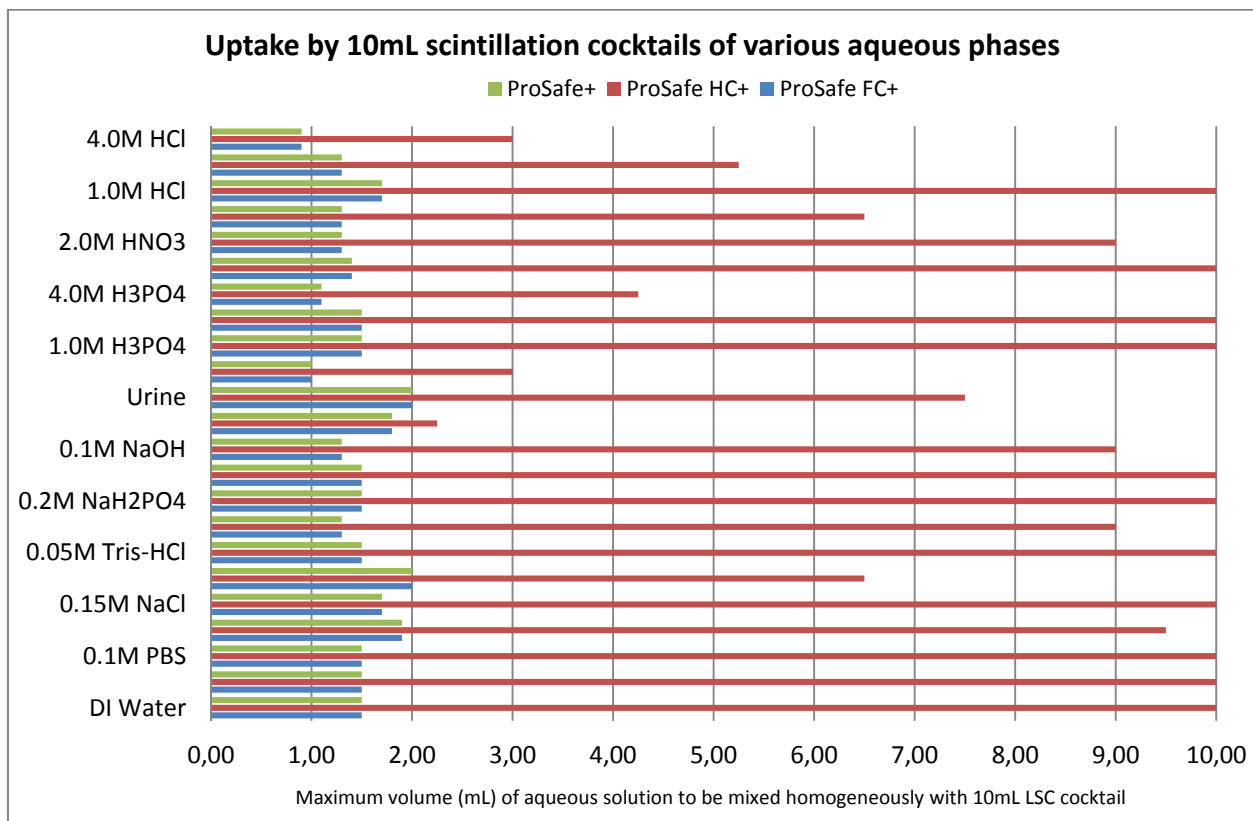


Figure 2: Uptake of various samples in 10 mL of ProSafe+ cocktails

Table 1 shows the result of a series of experiments performed by James Thomson (Meridian Biotechnologies Ltd.) testing the maximum accepted volume of four liquid scintillation cocktails for aqueous solutions most commonly used for radionuclide elution from our extraction chromatographic resins.

Table 1: Uptake of typical eluting agents in 10 mL of four different Meridian LSC cocktails at 20°C

Capacities @20° C	Gold Star	Gold Star LT2	ProSafe+	ProSafe HC+
0.1M citric acid	10.0 ml	0.75 - 10.0 ml	3.25 ml	7.5 ml
0.1M ammonium citrate	10.0 ml	1.25 - 7.5 ml	2.75 ml	5.5 ml
0.1M EDTA	10.0 ml	2.25 - 4.5 ml	3.40 ml	5.25 ml
0.05M HNO ₃	10.0 ml	10.0 ml	3.75 ml	10.0 ml
0.35M HNO ₃	10.0 ml	10.0 ml	5.75 ml	10.0 ml
2M HNO ₃	4.25 ml	2.75 ml	2.75 ml	4.5 ml
3M HNO ₃	3.25 ml	2.25 ml	2.25 ml	4.25 ml
4M HNO ₃	2.75 ml	2.25 ml	2.50 ml	4.0 ml