

Scintillation Cocktail Conversion by Application

Introduction

Revvity produces a wide variety of cocktails for Liquid Scintillation Counting and has for many years. Many of our cocktails come from legacy sources with older formulations. We find that some of the raw materials used to make these more mature cocktails are becoming more challenging to source. As we move forward with our development of newer, safer cocktails with reliably sourced materials, we find it is time to move away from some of our legacy cocktails to those with equivalent or better performance.

We have put together several Frequently Asked Questions to help the transition to suggested substitutions. If you find you need additional support for the transition, please contact us at Radsupport@revvity.com.

Pico-Fluor™ Plus convert to Ultima Gold™ for multipurpose applications

Q I currently use Pico-Fluor Plus, will I see any changes in my assay when switching to Ultima Gold?

A Pico-Fluor Plus is an NPE-free Pseudocumene based LSC cocktail, with a low flashpoint. The Ultima Gold is a NPE containing LSC cocktail based on DIN solvent, with a high flashpoint. When switching to Ultima Gold you will see similar sample load capacities. In the event that your normal sample to LSC cocktail ratio turns hazy or milky, add another 1ml of Ultima Gold until the sample turns clear. The Ultima Gold has an on average 5% higher ³H Efficiency compared to Pico-Fluor Plus.

Q Do I need to change my quench curve when switching from Pico-Fluor Plus to Ultima Gold?

A Yes, Pico-Fluor Plus requires the toluene based Quenched Standard set. Ultima Gold requires the Ultima Gold based Quenched Standards set.



Q Is the shelf-life the same for Pico-Fluor Plus and Ultima Gold?

A No, because of the formulation differences, the total shelf-life from production to expiration date is 30 months for Pico-Fluor Plus and 18 months for Ultima Gold.

Opti-Fluor™ convert to OptiScint™ MP for multipurpose applications

Q I currently use Opti-Fluor, will I see any changes in my assay when switching to OptiScint MP?

A Opti-Fluor is a LAB based LSC cocktail, with a high flashpoint. OptiScint MP is based on DIN solvent, also with a high flashpoint. Both Opti-Fluor and OptiScint MP have an acid pH, which enhances uptake of protein material. OptiScint MP in general has a higher sample load capacity, most samples can be converted 1:1 without any adjustment. The OptiScint MP has a higher ³H Efficiency compared to Opti-Fluor.

Q Do I need to change my quench curve when switching from Opti-Fluor to OptiScint MP?

A Preferably yes, Opti-Fluor requires the Ultima Gold based Quenched Standard set. OptiScint MP requires the newly introduced OptiScint Quenched Standards set or the Ultima Gold based Quenched Standards set. OptiScint Quenched standards are set to be available in Q2 2024.

Q Why is OptiScint MP only available in 1 L or 1 x 5 L packaging?

A Based on Opti-Fluor sales, we chose to be more flexible in packaging sizes for customers who require smaller volumes.

Q Is the shelf-life the same for Opti-Fluor and OptiScint MP?

A No, because of the formulation differences, the total shelf-life from production to expiration date is 30 months for Opti-Fluor and 18 months for OptiScint MP.

Flo-Scint™ A convert to OptiScint Flow for flow counting

Q I currently use Flo-Scint A, will I see any changes in my assay when switching to OptiScint Flow?

A Flo-Scint A is a Pseudocumene based LSC cocktail, with a low flashpoint. The OptiScint Flow is an NPE-free LSC cocktail based on DIN solvent, with a high flashpoint. When switching to OptiScint Flow you will see enhanced sample load capacities, meaning that you could try using a bit more sample per 10ml cocktail. In the rare case that your normal sample to LSC cocktail ratio turns hazy or milky, try using 1ml more OptiScint Flow until the sample turns clear. The OptiScint Flow has a comparable ³H Efficiency to Flo-Scint A.

Q Do I need to change my quench curve when switching from Flo-Scint A to OptiScint Flow?

A Yes, Flo-Scint A requires the Toluene based Quenched Standard set. OptiScint Flow requires the newly introduced OptiScint Quenched Standards set or the Ultima Gold based Quenched Standards set.

Q Why is OptiScint Flow only available in 1L or 1x5L packaging?

A Based on Flo-Scint sales, we chose to be more flexible in packaging sizes for customers who require smaller volumes.

Q Is the shelf-life the same for Flo-Scint A and OptiScint Flow?

A No, because of the formulation differences, the total shelf-life from production to expiration date is 30 months for Flo-Scint A and 18 months for OptiScint Flow.

BetaPlate Scint convert to OptiScint F for organic samples or filter counting

Q I currently use BetaPlate Scint, will I see any changes in my assay when switching to OptiScint F?

A BetaPlate Scint and OptiScint F are both LSC cocktail based on DIN solvent, with a high flashpoint. OptiScint F has the benefit of being methanol free. Samples can be converted 1:1 without any adjustment. The OptiScint F has a comparable ³H Efficiency to BetaPlate Scint.

Q Do I need to change my quench curve when switching from BetaPlate Scint to OptiScint F?

A Preferably yes, BetaPlate Scint requires the Ultima Gold based Quenched Standard set. OptiScint F requires the newly introduced OptiScint Quenched Standards set or the Ultima Gold based Quenched Standards set.

Q Is the shelf-life the same for BetaPlate Scint and OptiScint F?

A Yes, the total shelf-life from production to expiration date is 12 months for both BetaPlate Scint and OptiScint F.

Opti-Fluor O convert to OptiScint F for organic samples or filter counting

Q I currently use Opti-Fluor O, will I see any changes in my assay when switching to OptiScint F?

A Opti-Fluor O is a LAB based LSC cocktail, with a high flashpoint. OptiScint F is based on DIN solvent, with a high flashpoint. Samples can be converted 1:1 without any adjustment. The OptiScint F has a higher ³H Efficiency compared to Opti-Fluor O.

Q Do I need to change my quench curve when switching from Opti-Fluor O to OptiScint F?

A Preferably yes, Opti-Fluor O requires the Ultima Gold based Quenched Standard set. OptiScint F requires the newly introduced OptiScint Quenched Standards set or the Ultima Gold based Quenched Standards set.

Q Why is OptiScint F only available in 1L or 1x5L packaging?

A Based on Opti-Fluor O sales, we chose to be more flexible in packaging sizes for customers who require smaller volumes.

Q Is the shelf-life the same for Opti-Fluor O and OptiScint F?

A Yes, the total shelf-life from production to expiration date is 12 months for both Opti-Fluor O and OptiScint F.

MicroScint™ O convert to OptiScint™ F for organic samples or filter counting

Q I currently use MicroScint O, will I see any changes in my assay when switching to OptiScint F?

A MicroScint O is a DIN based LSC cocktail, with a high flashpoint and contains the scintillators PPO and DMA (9,10-Dimethylanthracene). OptiScint F is based on DIN solvent, with a high flashpoint and contains the scintillators PPO and Bis-MSB. Samples can be converted 1:1 without any adjustment. Depending on the application (measuring in plates or vials) and instrument (TopCount, MicroBeta or Tri-Carb), OptiScint F has an equivalent or higher 3H Efficiency compared to MicroScint O.

Q Do I need to change my quench curve when switching from MicroScint O to OptiScint F?

A Preferably yes, MicroScint O requires the Ultima Gold based Quenched Standard set. OptiScint MP requires the newly introduced OptiScint Quenched Standards set or the Ultima Gold based Quenched Standards set.

Q Why is OptiScint F available in 1L or 1x5L packaging?

A Based on OptiScint F sales, we chose to be more flexible in packaging sizes for customers who require larger volumes.

Q Is the shelf-life the same for MicroScint O and OptiScint F?

A Yes, the total shelf-life from production to expiration date is 12 months for both MicroScint O and OptiScint F.

General FAQs

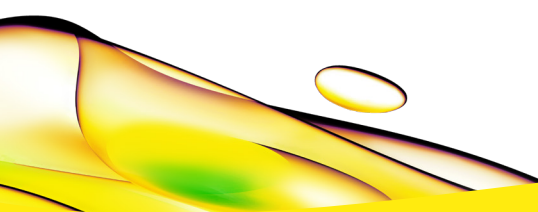
Q Do I need to change the type of vials I am working with?

A No, the used vials can remain the same as in your current assay. When you are switching from a Pseudocumene based cocktail to a DIN based cocktail, you could choose to switch from glass vial to HDPE vials as DIN based cocktail has low diffusion through the vial wall.

Q Can I still use the same Dispensette™ bottle top dispenser?

A Yes, the same type Dispensette bottle top dispenser can be used when switching to another cocktail. You can use the normal priming and cleaning procedure as you would when switching to another bottle of cocktail.

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