Solis BioDyne

HOT FIREPol®, SolisFAST®, RT and One-step RT-qPCR product range comparison

Annabel Toom
Technical Support Specialist
26.07.2024

SOLIS BIODYNE

Overview of main products

SOLIS BIODYNE

Overview of main products

	HOT FIREPol®	SolisFAST®	1-step RT
HOT-start Endpoint PCR	• HOT FIREPol® **MultiPlex Mix** • HOT FIREPol® **GC Master Mix Kit** • HOT FIREPol® **Blend Master Mix**	• SolisFAST® **Master Mix**	• **SolisFAST® 1-step **RT-PCR Kit with UNG (RTL)** NEW!*
Dye-based qPCR	• HOT FIREPol® EvaGreen® **qPCR Mix Plus** • HOT FIREPol® EvaGreen® **qPCR Supermix** • HOT FIREPol® SolisGreen® **qPCR Mix 2.0** • HOT FIREPol® EvaGreen® **HRM Mix**	• SolisFAST® SolisGreen® **qPCR Mix**	• SOLIScript® 1-step SolisGreen® **Kit 2.0**
Probe-based qPCR	• HOT FIREPol® **Multiplex qPCR Mix** • HOT FIREPol® **Probe Universal qPCR Kit** • HOT FIREPol® **Probe qPCR Mix Plus**	• SolisFAST® **Probe qPCR Mix** • SolisFAST® **Probe qPCR Mix** with UNG • **SolisFAST® **Lyo-Ready qPCR Kit with UNG***	• SOLIScript® 1-step **Probe Kit** • SOLIScript® 1-step **Multiplex Probe Kit** • SOLIScript® **Fast 1-step RT-qPCR Mix with UNG**

**Products in Italics haven't been added to the upcoming comparison tables.*

SOLIS BIODYNE

HOT-start PCR Master Mixes

SOLIS BIODYNE

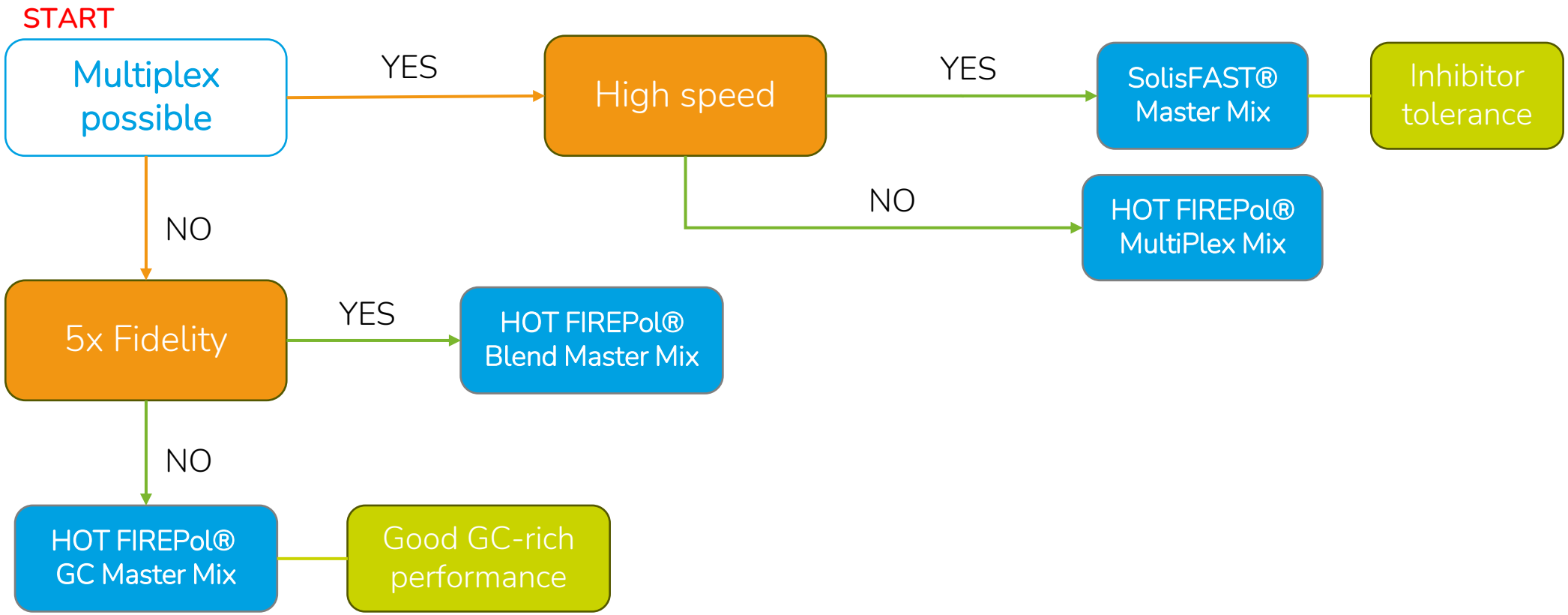
HOT-start PCR Master Mixes - DNA

FEATURES	HOT FIREPol® Blend Master Mix	HOT FIREPol® GC Master Mix Kit	HOT FIREPol® MultiPlex Mix	SolisFAST® Master Mix
Price range	€	€	€€	€€€
UNG version	No	No	No	Yes
Fidelity (vs Taq)	5x	1x	1x	1x
Speed	+	+	+	+++
Amplicon size	Exceptional with longer fragments! Up to 5 kb – cDNA Up to 3 kb - gDNA	Up to 5 kb – cDNA Up to 3 kb – gDNA	Up to 5 kb – cDNA Up to 3 kb - gDNA	Up to 5 kb – cDNA* Up to 3 kb - gDNA
GC-rich performance	+	+++	+	+
Targets	1	1	1-18	1-18
Inhibitor tolerance	NA	NA	NA	Yes
Applications	**Most popular** Singleplex assays Compatible with blunt-end and T/A cloning procedures Better for longer amplicons! ColonyPCR 16S analysis	Singleplex assays Excellent performance with difficult GC-rich templates (up to 79% GC content) and DNA secondary structures.	Singleplex and multiplex assays Diagnostic sector	Singleplex and multiplex assays Diagnostic sector Suitable for both slower and faster cyclers Good inhibitor tolerance- suitable in direct applications

* - ideal conditions

SOLIS BIODYNE

HOT-start PCR Master Mixes



OPTIONS
PRODUCTS
ADDITIONAL INFO

SOLIS BIODYNE

Dye-based qPCR Master Mixes

SOLIS BIODYNE

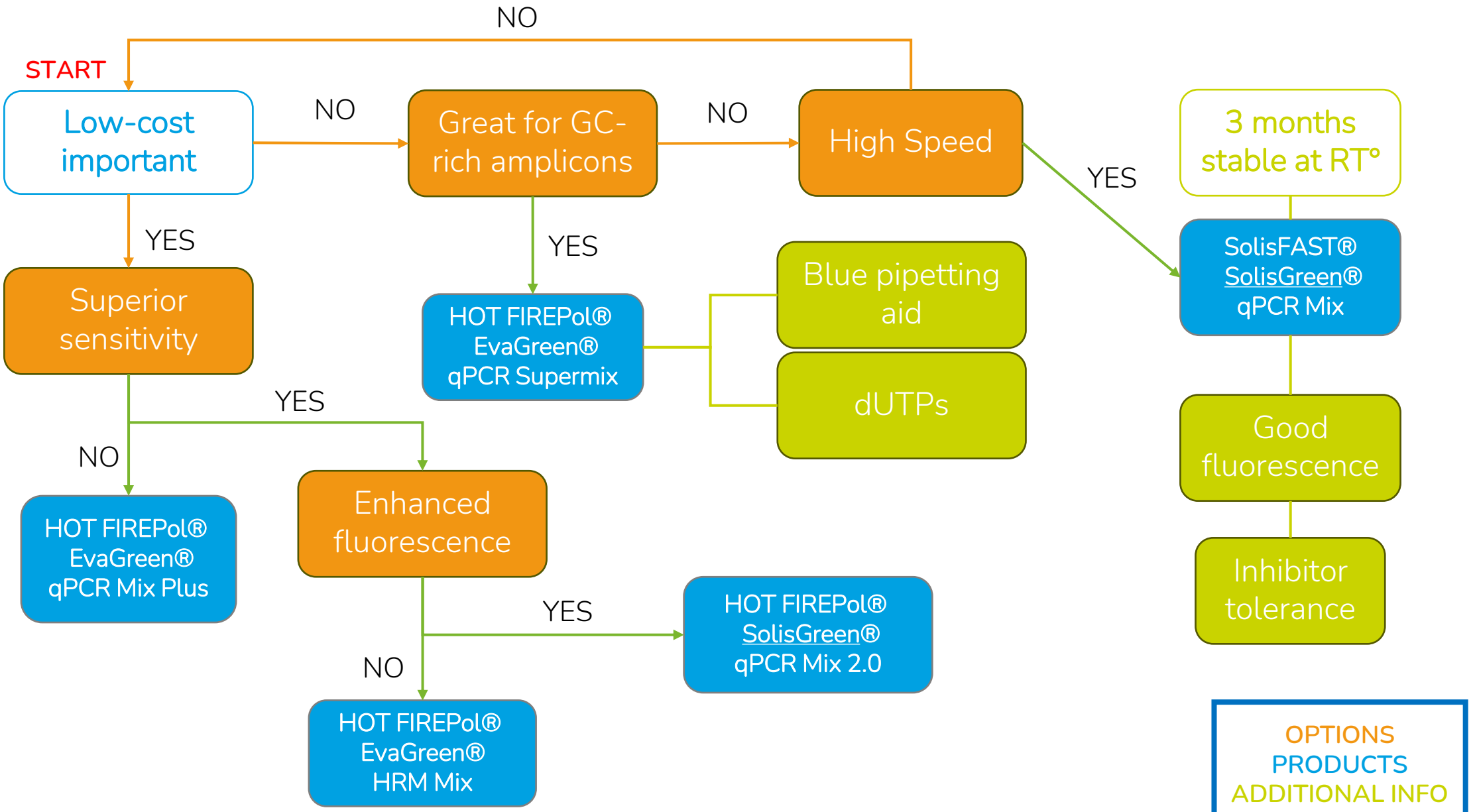
Dye-based qPCR Master Mixes - DNA

RT° – room temperature (+25 °C)

FEATURES	HOT FIREPol® EvaGreen® qPCR Mix Plus	HOT FIREPol® EvaGreen® HRM Mix	HOT FIREPol® EvaGreen® qPCR Supermix	HOT FIREPol® SolisGreen® qPCR Mix 2.0	SolisFAST® SolisGreen® qPCR Mix
Price range	€	€	€€	€	€€€
Performance with low template amounts	+	+++	++	+++	+++
Speed	+	+	+	+	+++
GC-rich performance	+	+	++	+	+
Blue pipetting aid	No	No	Yes	No	No
dUTP	No	No	Yes	No	No
Fluorescence	+	+	++	+++	+++
Inhibitor tolerance	NA	NA	NA	NA	Yes
Stability at RT°	Up to 1 month	Up to 1 month	Up to 1 month	Up to 1 month	Up to 3 months
License-free dye	No	No	No	Yes	Yes
Applications	Detection and quantification of DNA and cDNA targets Profiling gene expression Microbial detection Viral load determination	High-Resolution Melt (HRM) SNP detection	Detection and quantification of DNA and cDNA targets Profiling gene expression Microbial detection Viral load determination Excellent performance with GC-rich templates	Gene expression analysis and absolute quantification Pathogen detection and quantification Low-copy gene detection Cell-free DNA analysis	Gene expression analysis and absolute quantification Pathogen detection and quantification Low-copy gene detection Cell-free DNA analysis Good inhibitor tolerance-suitable in direct applications

SOLIS BIODYNE

Dye-based qPCR Master Mixes



SOLIS BIODYNE

Probe-based qPCR Master Mixes

SOLIS BIODYNE

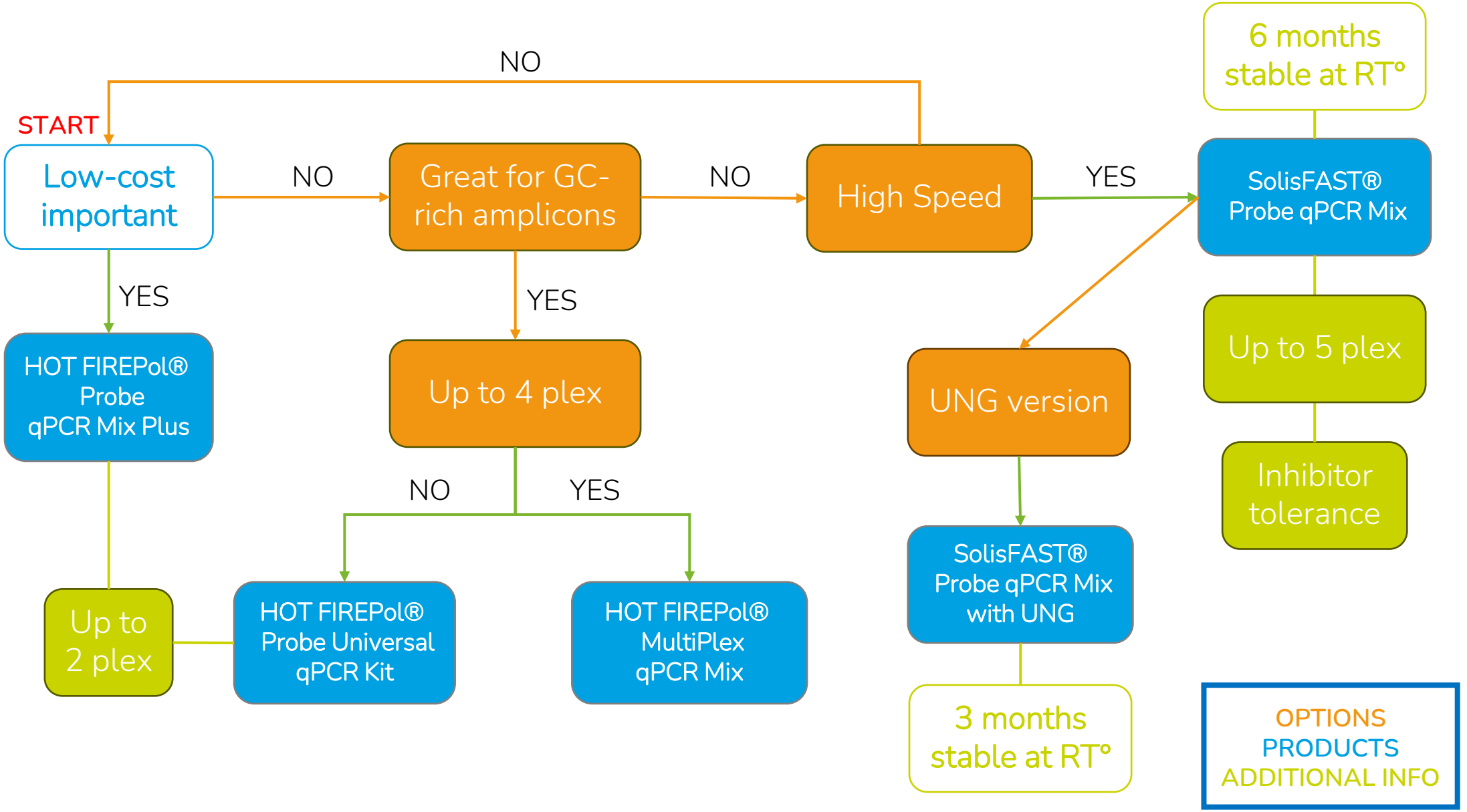
Probe-based qPCR Master Mixes - DNA

RT° – room temperature (+25 °C)

FEATURES	HOT FIREPol® Probe qPCR Mix Plus	HOT FIREPol® Probe Universal qPCR Kit	HOT FIREPol® MultiPlex qPCR Mix	SolisFAST® Probe qPCR Mix	SolisFAST® Probe qPCR Mix with UNG
Price range	€	€€	€€€	€€€	€€€
Multiplex	1-2 plex	1-2 plex	1-4 plex	1-5 plex	1-5 plex
Speed	+	+	+	+++	+++
GC-rich performance	+	++	++	+	+
Inhibitor tolerance	NA	NA	NA	Yes	Yes
dUTP	No	Yes	Yes	No	Yes
UNG	No	No	No	No	Yes
Reference dye	No ROX / ROX	ROX	No ROX / ROX / Purple	No ROX / ROX / Purple	No ROX / ROX / Purple
Fluorescence	+++	+++	+++	+++	+++
Stability at RT°	Up to 1 month	Up to 1 month	Up to 1 month	Up to 6 months	Up to 3 months
Applications	DNA/LNA hydrolysis probe-based assays Detection and quantification of DNA and cDNA targets Profiling gene expression Microbial detection Viral load determination	DNA/LNA hydrolysis probe-based assays Detection and quantification of DNA and cDNA targets Profiling gene expression Microbial detection Viral load determination	DNA/LNA hydrolysis probe-based assays Detection and quantification of DNA and cDNA targets Profiling gene expression Microbial detection Viral load determination	DNA/LNA hydrolysis probe-based assays Detection and quantification of DNA and cDNA targets Profiling gene expression Microbial detection Viral load determination Good inhibitor tolerance-suitable in direct applications	DNA/LNA hydrolysis probe-based assays Detection and quantification of DNA and cDNA targets Profiling gene expression Microbial detection Viral load determination Good inhibitor tolerance-suitable in direct applications

SOLIS BIODYNE

Probe-based qPCR Master Mixes



SOLIS BIODYNE

Reverse transcriptases

SOLIS BIODYNE

Reverse transcriptases – RNA➔cDNA

FEATURES	FIREScript®	SOLIScript®
	Excellent enzyme for standard applications	Superior specificity with gene specific primers
Origin	MMLV-based	*In silico designed*
Reaction temperature	50 °C (range: 37-60°C)	50 °C (range: 37-60°C)
Suitable primers	Random Oligo dT Gene specific	Oligo dT Gene specific (1-step especially) NB! **Not suitable with Random primers**
RNase H activity	Full	Reduced
Full length cDNA	Yes	Yes
Reaction set-up at RT°	Yes	Yes
Reaction time	5 min (for 1 kb) (range 5-60 min depending on the target length)	5 min (for 1 kb) (range 5-60 min depending on the target length)
Target length	~ 8 kb (tested up to 8,9 kb)	~ 8 kb (reduced yield from > 4 kb targets)
Specificity	++	+++
Inhibitor tolerance	NA	NA
Reaction type	Mostly 2-step	Both 1-step and 2-step
Applications	Gene expression analysis (cDNA synthesis) Complex templates	Gene expression analysis (cDNA synthesis) RNA-Seq or single-cell RNA sequencing Studying RNA modifications (preserving the original RNA structure more effectively) One-step RT-qPCR assays

SOLIS BIODYNE

One-step RT-qPCR Kits

SOLIS BIODYNE

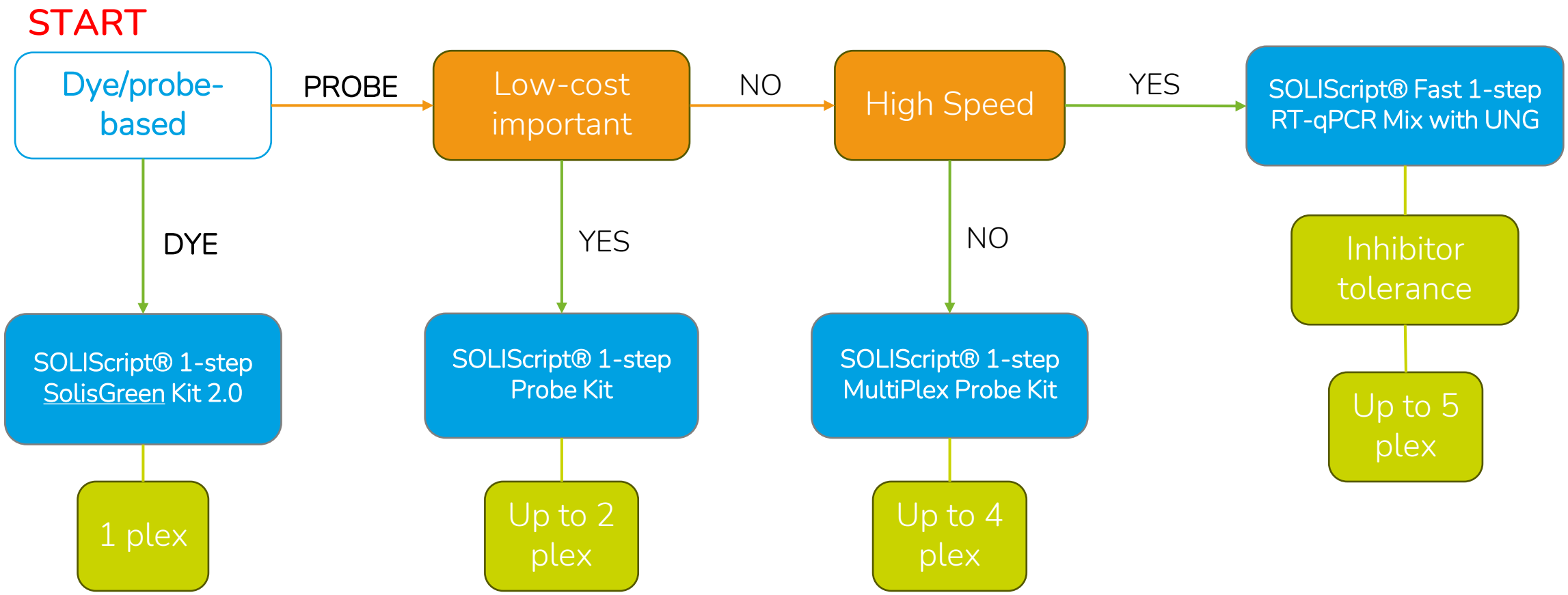
One-step RT-qPCR Kits - RNA→cDNA

FEATURES	SOLIScript® 1-step SolisGreen Kit 2.0	SOLIScript® 1-step Probe Kit	SOLIScript® 1-step MultiPlex Probe Kit	SOLIScript® Fast 1-step RT-qPCR Mix with UNG
	DYE	PROBE		
Price range	€€€	€	€€€	€€
Reference dye	ROX	ROX	No ROX / ROX / Purple	No ROX /ROX*
UNG	No UNG	No UNG	No UNG	With UNG
Speed	+	+	+	+++
Targets	1	1-2	1-4	1-5
DNA polymerase	HOT FIREPol®	HOT FIREPol®	HOT FIREPol®	(HOT) SolisFAST®
Format	2 tubes	2 tubes	2 tubes	1 tube
Performance with low template amounts	+++	+++	+++	+++
Inhibitor tolerance	NA	NA	NA	Yes
Applications	Gene expression analysis and absolute quantification Pathogen detection and quantification Low-copy gene detection	Detection and quantification of RNA targets with qPCR DNA/LNA hydrolysis probe-based assay Suitable for singleplex or duplex reactions	Detection and quantification of RNA targets with qPCR DNA/LNA hydrolysis probe-based assays Suitable for singleplex and multiplex reactions	Detection and quantification of **RNA and DNA targets** DNA/LNA hydrolysis probe-based assays Suitable for singleplex and multiplex reactions

* ROX – upon request

SOLIS BIODYNE

One-step RT-qPCR Kits



OPTIONS
PRODUCTS
ADDITIONAL INFO

SOLIS BIODYNE

Thank you!