



Reliable, Safe, Nonmutagenic DYES with HIGH SENSITIVITY



qPCR Dyes

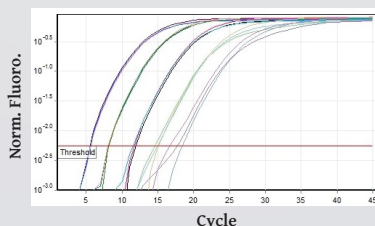
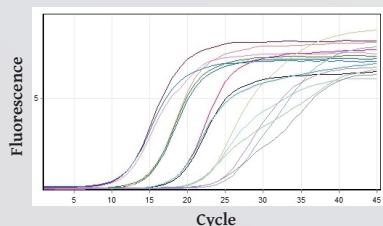
Viva qGreen I Fluorescent Dye (20x in DMSO) (equivalent to SYBR® Green Dye)

Viva qGreen I Fluorescent Dye (equivalent to SYBR® Green Dye) is a sensitive green fluorescent nucleic acid dye used for detection of double stranded DNA. The dye is widely used in non-specific detection of amplification in quantitative real-time PCR (qPCR) experiments. The detection is monitored by measuring the increase in fluorescence throughout the cycles.



Features

- Easy and affordable** : Probes are not required, reduce assay setup and running cost; given that PCR primers are well designed and reaction is well characterized.
- High sensitivity** : Increased fluorescence when bound to any double-stranded DNA.
- Highly stable** : Stable during storage and under PCR condition, able to withstand repeated freeze-thaw cycles.
- Versatile applications** : Can be used as a general double stranded DNA binding dye for common DNA quantification, melt curve analysis, etc.
- Compatible with most system** : Compatible with major brands of qPCR instruments & enzyme systems.



Sample of DNA: Bacteria DNA
Test: qPCR test with Viva qGreen I Fluorescent Dye

Figure: Sensitivity of the Viva qGreen I Fluorescent Dye based real-time PCR assay. Amplification plot (cycle number versus fluorescence) of known copies of DNA standard (100ng – 0.01ng) was plotted with three replicates.

Note: SYBR® Green is a registered trademark of Molecular Probes, Inc.

No.	Color	Name	Type	Ct	Ct Comment
1		100ng	Standard	5.47	Mean Ct: 5.537
2		100ng	Standard	5.59	
3		100ng	Standard	5.55	
4		10ng	Standard	8.07	Mean Ct: 8.077
5		10ng	Standard	8.03	
6		10ng	Standard	8.13	
7		1ng	Standard	11.63	Mean Ct: 11.653
8		1ng	Standard	11.87	
9		1ng	Standard	11.46	
10		0.1ng	Standard	15.09	Mean Ct: 14.880
11		0.1ng	Standard	14.58	
12		0.1ng	Standard	14.97	
13		0.01ng	Standard	18.34	Mean Ct: 17.567
14		0.01ng	Standard	17.76	
15		0.01ng	Standard	16.66	

Viva qGreen II Fluorescent Dye (20x in Water) (equivalent to EvaGreen® Dye)

Viva qGreen II Fluorescent Dye (equivalent to EvaGreen® Dye) is one of the most sensitive dyes to detect double stranded DNA in quantitative real-time PCR (qPCR) experiments as well as high-resolution DNA melt curve analysis, yielding robust and reproducible results.



Non-hazardous to aquatic life



Non-toxic



Non-mutagenic

Features

Safer : The dye is noncytotoxic & nonmutagenic for safe handling and easy disposal down to drain, completely impermeable to cell membrane.

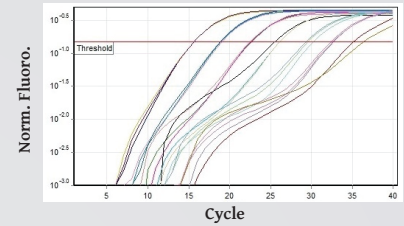
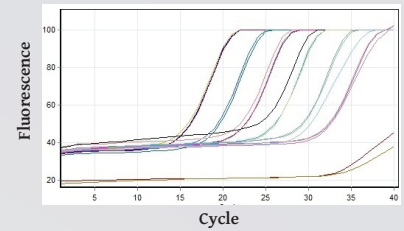
Higher sensitivity : Low PCR inhibitory and high concentration of dye used for maximal signal and high resolution DNA melt analysis.

Extremely stable : Stable during storage and under PCR condition. No dye decomposition in PCR buffer at 95-100°C for 48 hours. Highly stable under alkaline or acidic condition and able to withstand repeated freeze-thaw cycles.

Versatile applications : Used as a general double stranded DNA binding dye for DNA quantification, melt curve analysis and more.

Excellent for qPCR and isothermal application :

Brighter and more sensitive than Viva qGreen I Fluorescent Dye (equivalent to SYBR® Green) for detecting amplification due to novel 'release on demand' DNA binding mechanism.

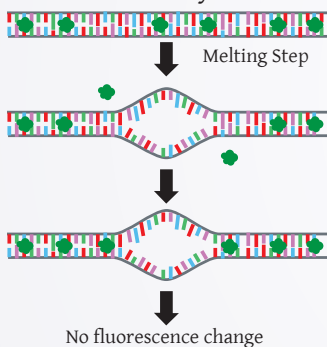


Sample of RNA: Dengue Virus RNA
Test: RT-qPCR test with Viva qGreen II Fluorescent Dye

Figure: Sensitivity of the Viva qGreen II Fluorescent Dye based real-time PCR assay. Amplification plot (cycle number versus fluorescence) of known copies of DNA standard (100ng - 0.001ng) was plotted with three replicates.

No.	Color	Name	Type	Ct	Ct Comment
1	Yellow	100ng	Standard	15.62	Mean Ct: 15.623
2	Blue	100ng	Standard	15.61	
3	Purple	100ng	Standard	15.64	
4	Pink	10ng	Standard	19.06	Mean Ct: 18.953
5	Light Blue	10ng	Standard	18.94	
6	Teal	10ng	Standard	18.86	
7	Red	1ng	Standard	22.48	Mean Ct: 22.557
8	Green	1ng	Standard	22.63	
9	Purple	1ng	Standard	22.56	
10	Black	0.1ng	Standard	25.50	Mean Ct: 25.913
11	Light Blue	0.1ng	Standard	26.12	
12	Yellow	0.1ng	Standard	26.12	
13	Light Green	0.01ng	Standard	29.59	Mean Ct: 29.737
14	Light Blue	0.01ng	Standard	30.27	
15	Light Blue	0.01ng	Standard	29.35	
16	Purple	0.001ng	Standard	32.66	Mean Ct: 32.533
17	Purple	0.001ng	NTC	32.58	
18	Purple	0.001ng	NTC	32.36	
19	Red	NTC	NTC	35.17	
20	Yellow	NTC	NTC	36.37	

Viva qGreen I Fluorescent Dye (equivalent to SYBR® Green Dye)



Viva qGreen II Fluorescent Dye (equivalent to EvaGreen® Dye)

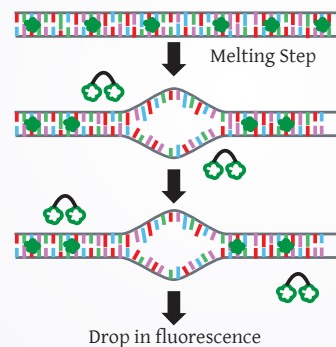
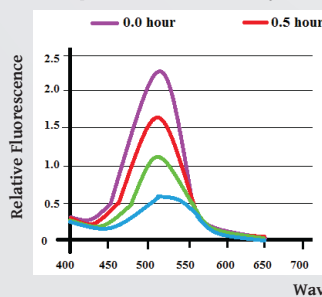


Figure: Viva qGreen I Fluorescent Dye quickly rebinds to the regions that remain double stranded, there is no drop in fluorescence. Viva qGreen II Fluorescent Dye does not redistribute from the melted regions of single-stranded DNA back to double-stranded DNA, resulting in a reduction of fluorescence. This difference gives the Viva qGreen II Fluorescent Dye the higher sensitivity in detecting amplification due to "release on demand" DNA binding mechanism.

Viva qGreen I Fluorescent Dye (equivalent to SYBR® Green Dye)



Viva qGreen II Fluorescent Dye (equivalent to EvaGreen® Dye)

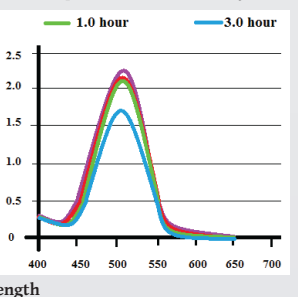


Figure: A solution of both Viva qGreen I and Viva qGreen II Fluorescent Dyes, each at 1.2µM concentration in Tris Buffer was incubated at 99°C. The absorption spectrum of each solution was followed over a period of 3 hours.

Note: EvaGreen® is a registered trademark of Biotium, Inc.

Ordering Information:

Viva qGreen I Fluorescent Dye 20X in DMSO (equivalent to SYBR® Green Dye), 1ml / pack size, Cat. No. SD1101
Viva qGreen II Fluorescent Dye 20X in Water (equivalent to EvaGreen® Dye), 1ml / pack size, Cat. No. SD1103

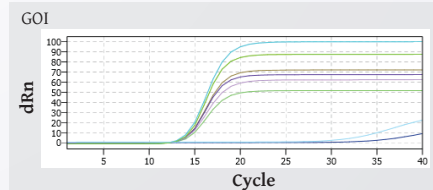


Figure: From the graph and table showed, mean Ct value of test using 10ng of DNA template using EvaGreen® Dye from Biotium was 17.457 while mean Ct value of test using Viva qGreen II Fluorescent Dye from Vivantis was 16.703. There is no significant difference by using both fluorescent dyes (significant difference result was set with 3 Ct value difference).

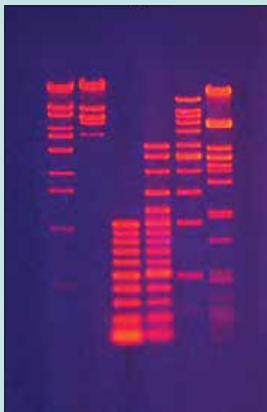
Well	Sample Name	Sample Type	Group	Gene	Ct	Mean Ct
A4	Biotium	Unknown	Group 1		16.86	17.457
B4	Biotium	Unknown	Group 1		18.54	
C4	Biotium	Unknown	Group 1		16.97	
D4	NTC	NTC	Group 1		No Ct	
E4	Vivantis	Unknown	Group 1		16.19	16.703
F4	Vivantis	Unknown	Group 1		17.54	
G4	Vivantis	Unknown	Group 1		16.38	
H4	NTC	NTC	Group 1		No Ct	

Vivantis Technologies Sdn. Bhd.

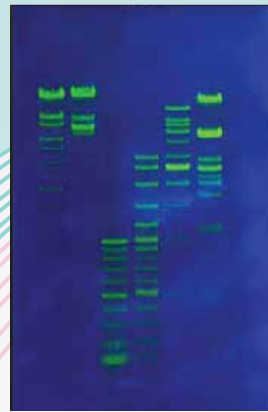
f in @ y Vivantis Technologies

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Technical Support: vivalab@vivanttechnologies.com



**ViSafe Red
Gel Stain**



**ViSafe Green
Gel Stain**



SAFER than EtBr!

MORE SENSITIVE than EtBr or SYBR® Green!

Nucleic Acid Dye

ViSafe Red Gel Stain & ViSafe Green Gel Stain

ViSafe Red Gel Stain and ViSafe Green Gel Stain are stable, sensitive and environmentally safe fluorescent nucleic acid dye for staining double-stranded DNA (dsDNA), single-stranded DNA (ssDNA) or RNA in agarose gels or polyacrylamide gels.

Both green/red gel stain and EtBr have the same spectra, so the **ViSafe Red/Green Nucleic Acid Stain** able to replace Ethidium Bromide (EtBr) without changing existing imaging system. **ViSafe Red/Green Nucleic Acid Stain** is designed to replace the highly toxic ethidium bromide (EtBr). The dye is confirmed by Ames test results that it is impenetrable to latex gloves and cell membranes. By using the suggested working concentrations in gel staining, the dye is proven unable to cross cell membranes; and it is noncytotoxic and nonmutagenic at working concentrations.

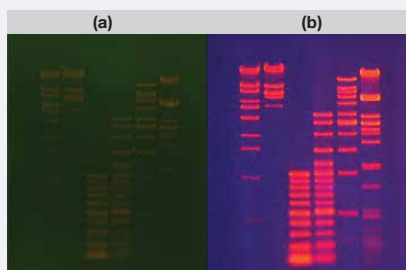


Features

- **Safer**
Noncytotoxic & nonmutagenic shown by Ames tests.
- **Higher sensitivity**
More sensitive compared to EtBr or SYBR® Green Nucleic Acid Stain.
- **Extremely stable**
Stable at room temperature for long-term storage. Stable to be microwaved or heated. The working solution is stable at room temperature when kept in dark.
- **Wide application**
Suitable to stain dsDNA, ssDNA and RNA. Suitable to use in agarose gel or polyacrylamide gel. Compatible with down-stream applications, such as gel recovery and cloning.
- **Easy staining protocols**
Easy precast gel staining & post-staining procedures.
- **Compatible with most imaging system**
Gel can be viewed with standard UV transilluminator, visible light gel reader, or other gel imaging system.

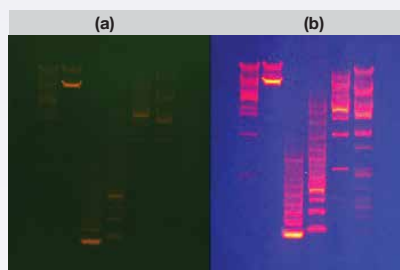


ViSafe Red Gel Stain & ViSafe Green Gel Stain



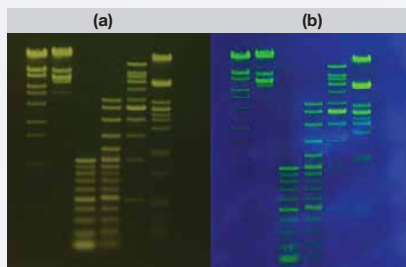
Post-staining for Agarose Gel

Figure 1: Various ladders and markers run at 1.5% TBE agarose gel. The agarose gel is post-stained with ViSafe Red Gel Stain. The gel is visualized using transilluminator with (a) blue light; (b) UV light.



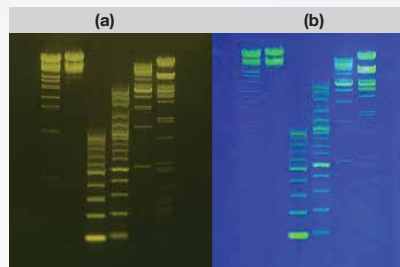
Precast for Agarose Gel

Figure 2: The agarose gel is pre-stained with ViSafe Red Gel Stain. Various ladders and markers run at 1.5% TBE pre-stained agarose gel. The gel is visualized using transilluminator with (a) blue light; (b) UV light.



Post-staining for Agarose Gel

Figure 1: Various ladders and markers run at 1.5% TBE agarose gel. The agarose gel is post-stained with ViSafe Green Gel Stain. The gel is visualized using transilluminator with (a) blue light; (b) UV light.



Precast for Agarose Gel

Figure 2: The agarose gel is pre-stained with ViSafe Green Gel Stain. Various ladders and markers run at 1.5% TBE pre-stained agarose gel. The gel is visualized using transilluminator with (a) blue light; (b) UV light.

Ordering Information: ViSafe Green Gel Stain (10000X in water), 500µl/pack, Cat. No. SD0101
ViSafe Red Gel Stain (10000x in water), 500µl/pack, Cat. No. SD0103

Tracking Dye

6X Loading Dye



6X Loading Dye (with xylene cyanol gel loading dye) from Vivantis contains two dyes; bromophenol blue and xylene cyanol FF to track DNA migration during electrophoresis. Bromophenol blue migrates with the 300bp fragment while xylene cyanol FF migrates with the 4000bp fragment.



6X Loading Dye with SDS

Alternatively, **6X Loading Dye with SDS** is specially designed for loading DNA samples that contains high amount of proteins that may form complexes with DNA during gel electrophoresis. This product is suitable for use in prevention of band-shift (due to protein binding) or annealing of DNA during both agarose and polyacrylamide gel electrophoresis. The 6X Loading Dye with SDS contains 2 dyes; bromophenol blue and xylene cyanol FF to track DNA migration during electrophoresis.



Ordering Information: 6X Loading Dye (with xylene cyanol gel loading dye), 5 x 1 ml, Cat. No. NM0410
6X Loading Dye with SDS, 5 x 1 ml, Cat. No. NM0416