

We are pleased to introduce our DNA & RNA Synthesis catalogue.

Biosolve offers an extensive line of standard phosphoramidites, RNA phosphoramidites, specialty amidites and modifiers, solid supports CPG, reagents and solvents for a wide variety of instruments. Customized products, such as special phosphoramidites, modifiers and linkers can be provided as well.

Biosolve is a subsidiary of Bio-Lab Ltd., an ISO 9001 and 14001 certified manufacturing company. As such, quality is our continuous concern. All of our products are prepared under strict and detailed operating procedures.

- Each product, solvent or formulation is purified to meet most stringent specifications. Minor impurities, known to affect the yield of DNA & RNA synthesis, are eliminated through chemical and physical treatments.
- Phosphoramidites are tested for high performances. Each batch is individually analyzed to meet duly validated Standard Operating Procedures.
- To ensure maximum shelf-life, containers are filled under inert atmosphere and Water content is kept at minimum workable levels.
Typical water content of less than 10 ppm is available for Acetonitrile Diluent, ensuring improved yields throughout critical steps.
- Solutions are micro-filtered through 0.2 μm membranes.
- Certificates of Analysis detailing results of our Quality Control testing are delivered with each product.
- Custom synthesis, formulation and packaging can be discussed under complete confidentiality.

How to contact us

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Standard Phosphoramidites

Quality Assurance & Specifications

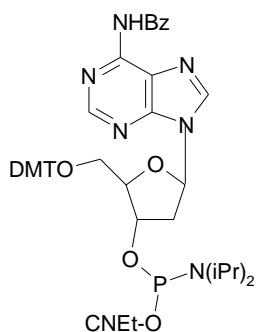
- HPLC – Identity is confirmed by comparison with a reference sample. Purity > 98%.
- NMR – Purity is determined by ³¹P NMR and isomeric purity is verified by ¹H NMR.
- Coupling Test – Coupling efficiency > 99%.
- Solution Test – 0.1M solution clear and free of particulate contamination.
- Loss on drying – volatile components are determined to be < 2%.
- Water content – determined to be < 0.4%.
- Stability tests are performed over a period of 24 months.
- Certificate of analysis are available for every batch; even for long past delivered products.

Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size (g)
Bz-dA-CE Phosphoramidite	161024-F1	161024-E1	0.25
	161024-F2	161024-E2	0.5
	161024-F3	161024-E3	1
	161024-F4	161024-E4	2
	161024-F5	161024-E5	5
Bz-dC-CE Phosphoramidite	161124-F1	161124-E1	0.25
	161124-F2	161124-E2	0.5
	161124-F3	161124-E3	1
	161124-F4	161124-E4	2
	161124-F5	161124-E5	5
Ac-dC-CE Phosphoramidite	153024-F1	153024-E1	0.25
	153024-F2	153024-E2	0.5
	153024-F3	153024-E3	1
	153024-F4	153024-E4	2
	153024-F5	153024-E5	5
iBu-dG-CE Phosphoramidite	161224-F1	161224-E1	0.25
	161224-F2	161224-E2	0.5
	161224-F3	161224-E3	1
	161224-F4	161224-E4	2
	161224-F5	161224-E5	5
dmf-dG-CE Phosphoramidite	152924-F1	152924-E1	0.25
	152924-F2	152924-E2	0.5
	152924-F3	152924-E3	1
	152924-F4	152924-E4	2
	152924-F5	152924-E5	5
dT-CE Phosphoramidite	161324-F1	161324-E1	0.25
	161324-F2	161324-E2	0.5
	161324-F3	161324-E3	1
	161324-F4	161324-E4	2
	161324-F5	161324-E5	5

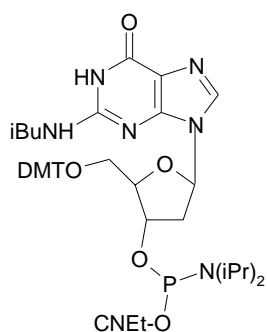
For further Packages, please inquire

Abbreviations

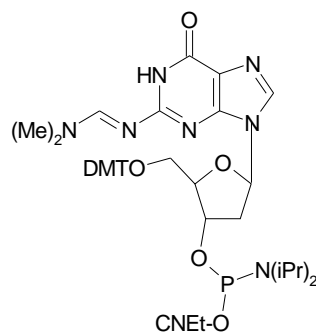
Ac	Acetyl
Bz	Benzoyl
CE	Cyanoethyl
CNEt	Cyanoethyl
Dmf	Dimethylformamide
DMT	4,4' Dimethoxytrityl
iBu	Isobutyryl
iPr	Isopropyl



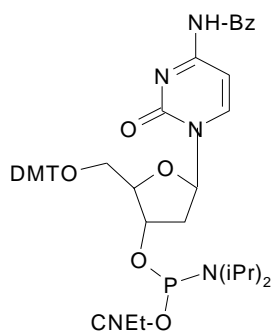
Bz-dA-CE Phosphoramidite



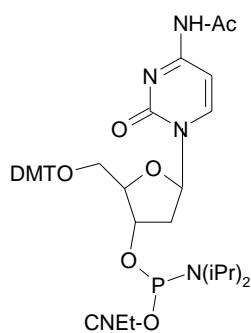
iBu-dG-CE Phosphoramidite



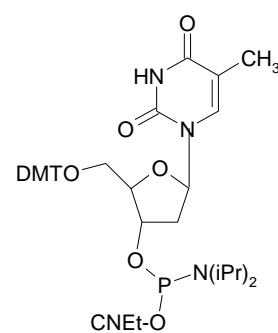
dmf-dG-CE Phosphoramidite



Bz-dC-CE Phosphoramidite



Ac-dC-CE Phosphoramidite



dT-CE Phosphoramidite

RNA Phosphoramidites

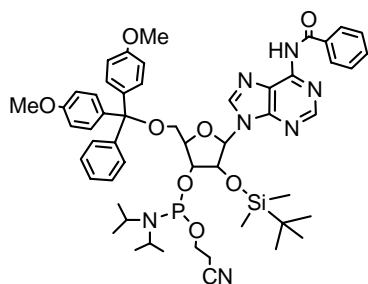
2'-OTBDMS Protected amidites

Quality Assurance & Specifications

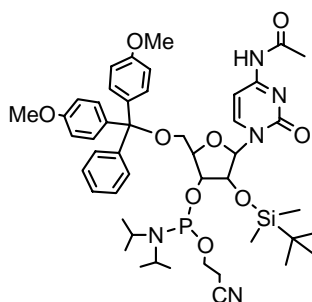
- HPLC – Identity is confirmed by comparison with a reference sample.
- NMR – Purity is determined by ³¹P NMR and isomeric purity is verified by ¹H NMR.
- Coupling Test – Coupling efficiency > 98%.
- Solution Test – 0.1M solution clear and free of particulate contamination.
- Loss on drying – volatile components are determined to be < 2%.
- Water content – determined to be < 0.4%.
- Certificate of analysis are available for every batch; even for long past delivered products.

Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size (g)
N-Bz-A-OTBDMS-CE Phosphoramidite	182124-F1	182124-E1	0.25
	182124-F2	182124-E2	0.5
	182124-F3	182124-E3	1
N-Ac-C-OTBDMS-CE Phosphoramidite	182224-F1	182224-E1	0.25
	182224-F2	182224-E2	0.5
	182224-F3	182224-E3	1
N-iBu-G-OTBDMS-CE Phosphoramidite	182324-F1	182324-E1	0.25
	182324-F2	182324-E2	0.5
	182324-F3	182324-E3	1
U-OTBDMS-CE Phosphoramidite	182424-F1	182424-E1	0.25
	182424-F2	182424-E2	0.5
	182424-F3	182424-E3	1

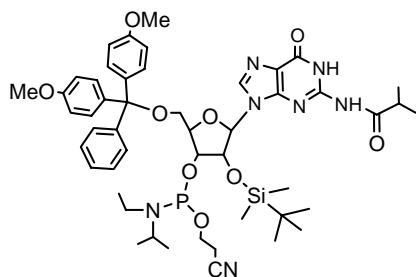
For further Packages, please inquire



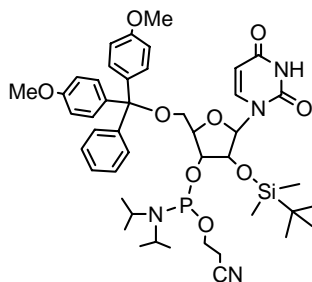
N-Bz-A-OTBDMS-CE Phosphoramidite



N-Ac-C-OTBDMS-CE Phosphoramidite



N-iBu-G-OTBDMS-CE Phosphoramidite



U-OTBDMS-CE Phosphoramidite

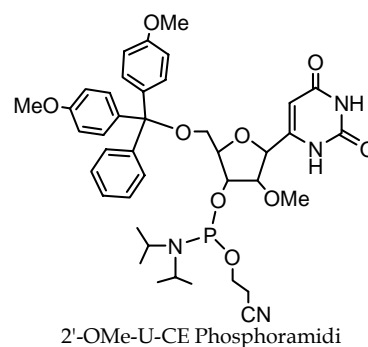
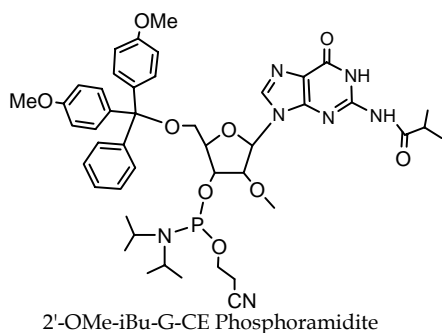
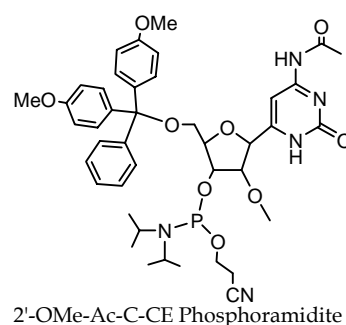
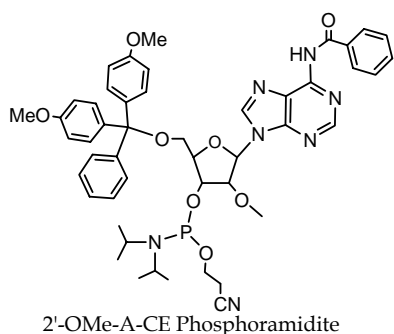
2'-OMe & 2'-F Protected amidites

Quality Assurance & Specifications

- HPLC - Identity is confirmed by comparison with a reference sample.
- NMR - Purity is determined by ³¹P NMR and isomeric purity is verified by ¹H NMR.
- Coupling Test - Coupling efficiency > 98%.
- Solution Test - 0.1M solution clear and free of particulate contamination.
- Loss on drying - volatile components are determined to be < 2%.
- Water content - determined to be < 0.4%.
- Certificate of analysis are available for every batch; even for long past delivered products.

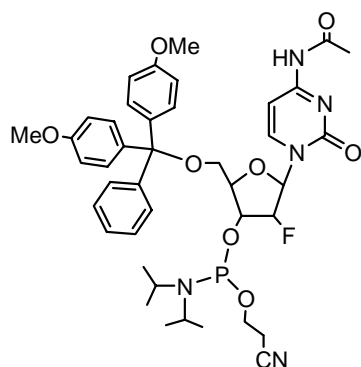
Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size (g)
2'-OMe-Bz-A-CE Phosphoramidite	179124-F1	179124-E1	0.25
	179124-F2	179124-E2	0.5
	179124-F3	179124-E3	1
2'-OMe-Ac-C-CE Phosphoramidite	179324-F1	179324-E1	0.25
	179324-F2	179324-E2	0.5
	179324-F3	179324-E3	1
2'-OMe-iBu-G-CE Phosphoramidite	179424-F1	179424-E1	0.25
	179424-F2	179424-E2	0.5
	179424-F3	179424-E3	1
2'-OMe-U-CE Phosphoramidite	179524-F1	179524-E1	0.25
	179524-F2	179524-E2	0.5
	179524-F3	179524-E3	1

For further Packages, please inquire

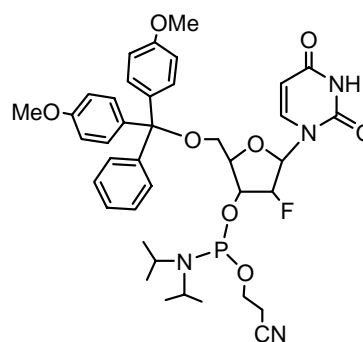


Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size (g)
2'-F-Ac-C-CE Phosphoramidite	179724-F1	179724-E1	0.25
	179724-F2	179724-E2	0.5
	179724-F3	179724-E3	1
2'-F-U-CE Phosphoramidite	179624-F1	179624-E1	0.25
	179624-F2	179624-E2	0.5
	179624-F3	179624-E3	1

For further Packages, please inquire



2'-F-Ac-C-CE Phosphoramidite



2'-F-U-CE Phosphoramidite

Specialty Amidites and Modifiers

5'- Amino & internal Modifiers

5'-Amino Modifiers are phosphoramidites which are used to produce a functional amine group on the 5'-terminus of oligonucleotides. The modifiers incorporate a C6 spacer with a primary amino group which can be used for subsequent conjugation to a vast majority of applications, such as dyes or labels.

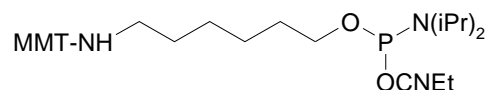
The MMT protecting group can be removed on the DNA synthesizer by DCA treatment (usually 3% DCA/DCM). For cartridge purification, the final cleavage of the MMT group can be accomplished using a TFA solution (usually 2.5% TFA).

Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size
5'-Amino-Modifier C6	173424-F6	173424-E6	100 µmoles
	173424-F1	173424-E1	250 mg
5'-Amino-Modifier C6 TFA	173524-F6	173524-E6	100 µmoles
	173524-F1	173524-E1	250 mg
Amino-Modifier C6 dT	175624-F6	175624-E6	100 µmoles
	175624-F1	175624-E1	250 mg

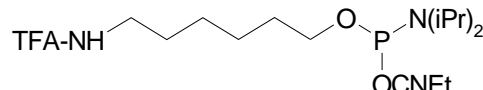
For further Packages, please inquire.

Abbreviations

CNEt	Cyanoethyl
DCA	Dichloroacetic acid
DMT	4,4' Dimethoxytrityl
MMT	4-Monomethoxytrityl
TFA	Trifluoroacetyl



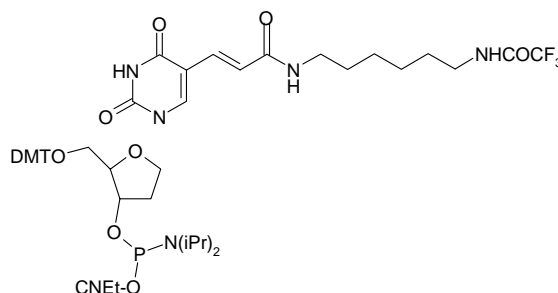
5'-Amino-Modifier C6



5'-Amino-Modifier C6 TFA

After addition of the Amino Modifier C6-dT product in place of dT residue, the primary amino group can be used for subsequent labelling such as dyes or enzymes.

The free primary amine obtained by normal deprotection with ammonia is attached via a linker suitable for further conjugation.



Amino Modifier C6-dT

5'-Thiol Modifiers

5'-Thiol Modifiers are phosphoramidites used to produce a functional thiol group on the 5'-terminus of oligonucleotides. Thiol modification allows attachment of a variety of products, such as fluorescent dyes, maleimide compounds, biotin and proteins.

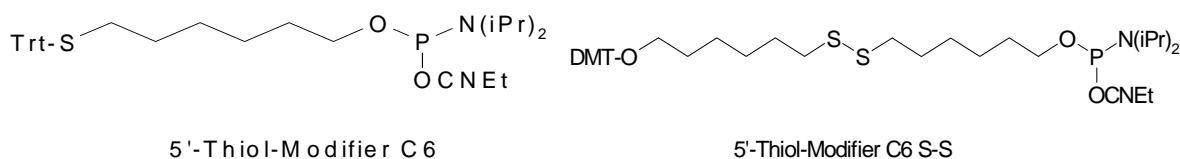
The trityl group is used to protect the thiol and is not acid labile. The trityl protecting group which is lipophilic allows a trityl-on reversed-phase purification. A final deblocking of the oligonucleotide is accomplished by oxidation with silver nitrate and dithiothreitol (DTT).

Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size
5'-Thiol-Modifier C6	175424-F6	175424-E6	100 µmoles
	175424-F1	175424-E1	250 mg
5'-Thiol-Modifier C6 S-S	175524-F6	175524-E6	100 µmoles
	175524-F1	175524-E1	250 mg

For further Packages, please inquire

Abbreviations

CNEt	Cyanoethyl
DMT	4,4' Dimethoxytrityl
DTT	Dithiothreitol
Trt	Trityl



5'-Phosphorylating Modifiers

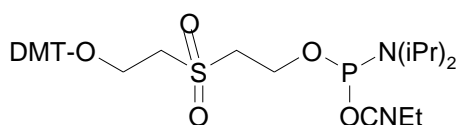
5'-Phosphorylating Modifiers are phosphoramidites used as an alternative to enzymatic techniques for 5'-phosphorylation of oligonucleotides. The DMT group allows determination of phosphorylation efficiency.

The DMT-2,2'-Sulfonyldiethanol group of the 5'-Phosphate Amidite is eliminated during the standard ammonium hydroxide treatment, rendering this compound incompatible with DMT-on reversed-phase purification.

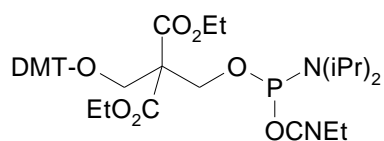
On the other side, the DMT of the 5'-Phosphorylating Reagent II is stable to the standard ammonium hydroxide deprotection allowing DMT-on reversed-phased purification. A final deblocking of the oligonucleotide can be accomplished with trifluoroacetic acid or with acetic acid / water treatment.

Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size
5'-Phosphate Amidite	173624-F6	173624-E6	100 µmoles
	173624-F1	173624-E1	250 mg
5'-Phosphorylating Reagent II	173724-F6	173724-E6	100 µmoles
	173724-F1	173724-E1	250 mg

For further Packages, please inquire



5'-Phosphate Amidite



5'-Phosphorylating Reagent II

Biotin Labelling

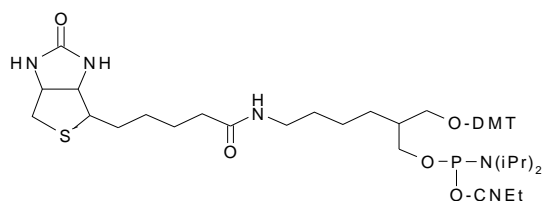
Biotin amidites are used in the 5' labeling of oligonucleotides. Biotin labeling can be captured by avidin or streptavidin.

The biotin phosphoramidite is a good alternative to the use of a biotin-NHS ester procedure. This compound allows multiple additions at the 5'-terminus of an oligonucleotide.

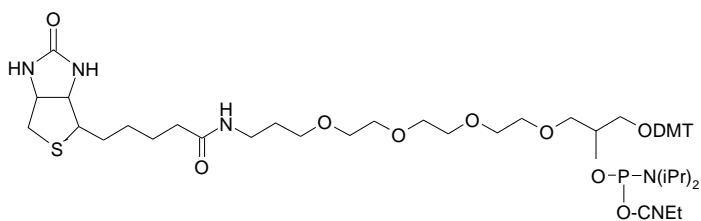
An improvement in the use of multiple labeling has been achieved through the Biotin-TEG phosphoramidite. The mixed polarity of the triethyleneglycol linker is very helpful for multiple additions as well as optimal capture by avidin and streptavidin.

Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size
Biotin-Phosphoramidite	175224-F7	175224-E7	50 μmoles
	175224-F6	175224-E6	100 μmoles
	175224-F1	175224-E1	250 mg
Biotin-TEG-Phosphoramidite	175324-F7	175324-E7	50 μmoles
	175324-F6	175324-E6	100 μmoles
	175324-F1	175324-E1	250 mg
5'-Biotin Phosphoramidite	174624-F7	174624-E7	50 μmoles
	174624-F6	174624-E6	100 μmoles
	174624-F1	174624-E1	250 mg

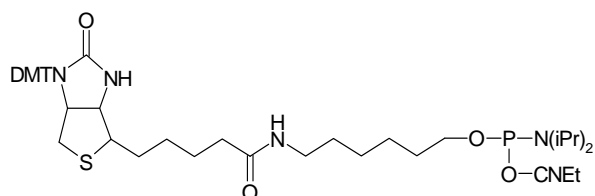
For further Packages, please inquire



Biotin Phosphoramidite



Biotin-TEG Phosphoramidite



5'-Biotine Phosphoramidite

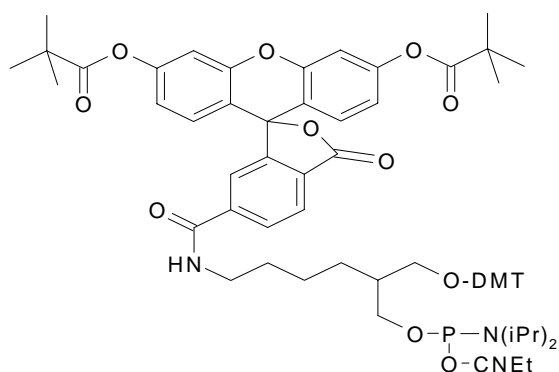
5'-Fluorescein Amidites

5'-Fluorescein Phosphoramidite is mostly used to label sequencing primers. The DMT group of the 6-Fluorescein phosphoramidite allows coupling quantification. A coupling of 15 minutes is recommended and we recommend to remove the DMT group before oligonucleotide purification. Due to the instability of the Fluorescein to light, we recommend to use the phosphoramidite immediately after the preparation of the solution.

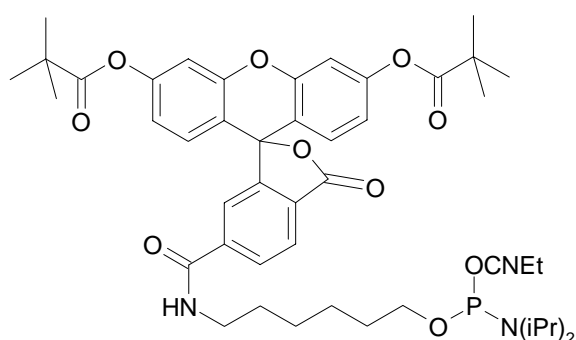
The 6-FAM Phosphoramidite has found applications in Genomic research, such as DNA sequencing and amplification. The product contains no DMT but is a single isomer of the 6-carboxyfluorescein with a 6 carbon linker. A coupling efficiency of more than 95% can be achieved resulting in a single fluorescein-oligonucleotide peak on reversed-phased purification. Use of methylamine should be avoided.

Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size
6-Fluorescein-Phosphoramidite	173824-F7	173824-E7	50 μmoles
	173824-F6	173824-E6	100 μmoles
	173824-F1	173824-E1	250 mg
5'-Fluorescein-Phosphoramidite (6-FAM)	173924-F7	173924-E7	50 μmoles
	173924-F6	173924-E6	100 μmoles
	173924-F1	173924-E1	250 mg

For further Packages, please inquire



6-Fluorescein Phosphoramidite



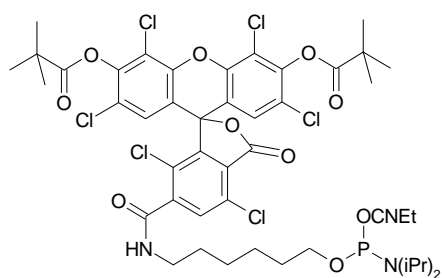
5'-Fluorescein Phosphoramidite (6-FAM)

TET and HEX Amidites

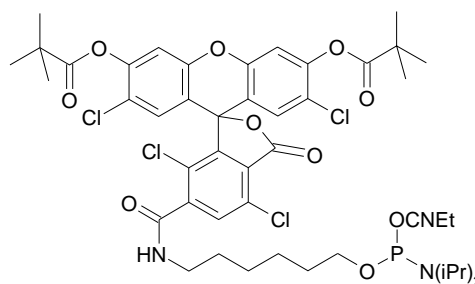
TET and HEX are derivatives which fluoresce in the Orange and the Pink region of the visible spectrum, respectively. As opposed, the Fluorescein itself fluoresces in the Green region of the visible spectrum. The use of these products is identical to the Fluorescein.

Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size
5'-Hexachloro-Fluorescein-Phosphoramidite (6-HEX)	175024-F7	175024-E7	50 µmoles
	175024-F6	175024-E6	100 µmoles
	175024-F1	175024-E1	250 mg
5'-Tetrachloro-Fluorescein-Phosphoramidite (6-TET)	175124-F7	175124-E7	50 µmoles
	175124-F6	175124-E6	100 µmoles
	175124-F1	175124-E1	250 mg

For further Package, please inquire



5'-Hexachloro-Fluorescein Phosphoramidite (6-HEX)



5'-Tetrachloro-Fluorescein Phosphoramidite (6-TET)

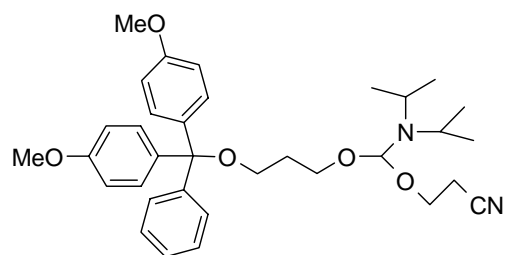
Spacer Modifiers

Spacer modifiers are designed for internal and 5'-modifications.

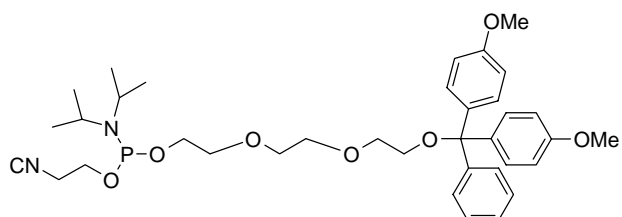
Spacer C-9 and spacer C-18 phosphoramidites are polyethyleneglycol-based that can be added sequentially when a longer arm is required.

dSpacer allows the introduction of an abasic site into oligonucleotides. Spacer C-3 has an aliphatic linker.

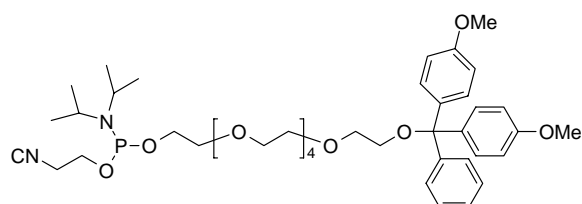
Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size
Spacer Phosphoramidite C3	243024-F7	243024-E7	50 µmoles
	243024-F6	243024-E6	100 µmoles
	243024-F1	243024-E1	250 mg
Spacer Phosphoramidite C9	242924-F7	242924-E7	50 µmoles
	242924-F6	242924-E6	100 µmoles
	242924-F1	242924-E1	250 mg
Spacer Phosphoramidite C18	242624-F7	242624-E7	50 µmoles
	242624-F6	242624-E6	100 µmoles
	242624-F1	242624-E1	250 mg
dSpacer	242724-F7	242724-E7	50 µmoles
	242724-F6	242724-E6	100 µmoles
	242724-F1	242724-E1	250 mg



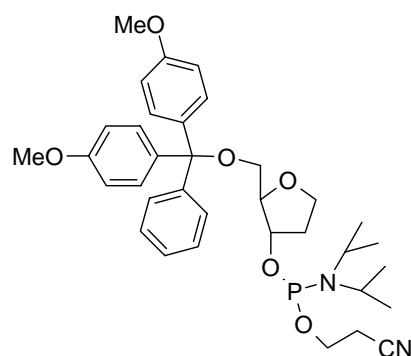
Spacer Phosphoramidite C3



Spacer Phosphoramidite C9



Spacer Phosphoramidite C18

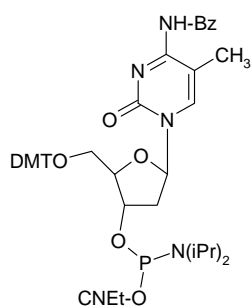


dSpacer

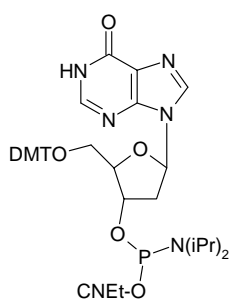
Duplex Modifiers

5-Me-dC is known to improve stacking and enhance binding; it stabilizes duplexes by increasing melting temperature of more than 1°C per addition.

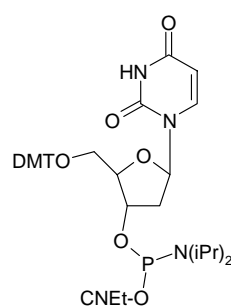
2-deoxyInosine and 2'-deoxyUridine amidites can be useful for primers designed in relation with degenerate sites.



5-methyl-2'-deoxycytidine



2'-deoxyInosine



2'-deoxyUridine

Product	Catalog N° for ABI	Catalog N° for Expedite	Pack Size
5-Methyl-2'-deoxyCytidine	170824-F6	170824-E6	100 µmoles
	170824-F1	170824-E1	250 mg
2'-deoxyInosine	054824-F6	054824-E6	100 µmoles
	054824-F1	054824-E1	250 mg
2'-deoxyUridine	055424-F6	055424-E6	100 µmoles
	055424-F1	055424-E1	250 mg

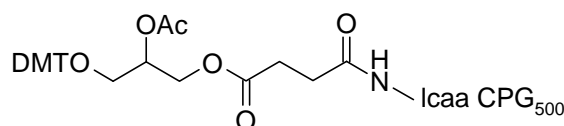
For further packages please inquire.

3'-Glyceryl-CPG

The 3'-Glyceryl-CPG is available with the standard Long Chain Alkyl Amine (LCAA) linker in both glass pore sizes, 500 and 1000 Angström. These supports are fully end-capped to ensure that CPG surface is inert in order to give clean and reproducible reaction profiles.

At the end of the oligonucleotide synthesis, the 3'-phosphoglyceryl terminus is oxidized by sodium periodate to form a 3'-phospho-glycaldehyde. The aldehyde may be further oxidized to the corresponding carboxylic acid. Either the aldehyde or the carboxylate may be used for subsequent conjugation to amine-containing products.

Test	Description	Method	Result
Description	Colorless to pale yellow	Visual inspection	Conforms
Coupling test			Conforms
Loading		UV spectroscopy determination of DMT release by acid, at 498 nm	52 µmol/g



Product	Catalog N°	Pack Size (g)
3'-Glyceryl-CPG-500A	055224-50	1
	055224-49	10
	055224-54	50
	055224-56	100
3'-Glyceryl-CPG-1000A	055324-50	1
	055324-49	10
	055324-54	50
	055324-56	100

Standard packages for Amidites and Modifiers.

Crimp type bottles.



1 2 3

Crimp bottles sizes - Characteristics

Description	Height (cm)	Diameter (cm)	Quantity (solid)	Quantity (liquid)
1 -100ml septum	9.5	5.1	50g, 10g or more	100 ml
2 - 60ml septum	10.5	3.3	1g, 2g or 5g	50 ml
3 - 15ml septum	4.8	3.2	0.25g, 0.5g or 1g	15 ml

Screw type bottles.



1 2 3 4 5

Screw bottles sizes - Characteristics

Description	Height (cm)	Diameter (cm)	Quantity (solid)	Quantity (liquid)
1-16oz 28/400 (480ml)	17.0	7.2	10g, 20g or more	450 ml
2- 8oz 28/400 (240ml)	14.0	5.8	5g or 10g	200 ml
3- 4oz 28mm (120 ml)	11.5	4.7	2g or 5g	100 ml
4- 2oz 28/400 (60ml)	9.5	3.7	1g, 2g	50 ml
5- 1oz 20/40 (30ml)	8.0	3.1	0.25g, 0.5g or 1g	25 ml

For further packages please inquire.

Synthesis support bulk

Biosolve supports use the standard Long Chain Alkyl Amine (LCAA) linker but differ in the glass pore size, 500 A and 1000 A. Biosolve supports are fully end-capped to ensure that CPG surface is inert in order to give clean, reproducible reaction profiles.

Bulk CPG Loading & Specifications:

500 A supports 25-45 $\mu\text{moles/g}$ - Pore size 500A +/- 20%; Grain size 120-200 mesh

1000 A supports 25-45 $\mu\text{moles/g}$ - Pore size 1000A +/- 20%; Grain size 120-200 mesh

Recommended Length:

500 A supports Short oligos < 30-35-mer

1000 A supports Long oligo > 35-mer

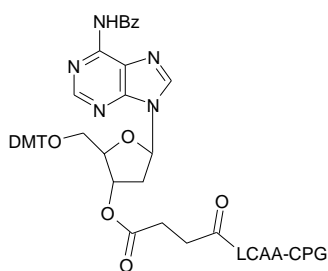
Product	Catalog N°	Pack Size (g)
dA(Bz)-CPG-500A	037624-50	1
	037624-49	10
	037624-54	50
	037624-56	100
dA(Bz)-CPG-1000A	038324-50	1
	038324-49	10
	038324-54	50
	038324-56	100
dC(Bz)-CPG-500A	037724-50	1
	037724-49	10
	037724-54	50
	037724-56	100
dC(Bz)-CPG-1000A	038424-50	1
	038424-49	10
	038424-54	50
	038424-56	100
dC(Ac)-CPG-500A	173024-50	1
	173024-49	10
	173024-54	50
	173024-56	100
dC(Ac)-CPG-1000A	173224-50	1
	173224-49	10
	173224-54	50
	173224-56	100
dG(iBu)-CPG-500A	037824-50	1
	037824-49	10
	037824-54	50
	037824-56	100
dG(iBu)-CPG-1000A	038524-50	1
	038524-49	10
	038524-54	50
	038524-56	100
dG(dmf)-CPG-500A	173124-50	1
	173124-49	10
	173124-54	50
	173124-56	100

Product	Catalog N°	Pack Size (g)
dG(dmf)-CPG-1000A	173324-50	1
	173324-49	10
	173324-54	50
	173324-56	100
dT-CPG-500A	037924-50	1
	037924-49	10
	037924-54	50
	037924-56	100
dT-CPG-1000A	038624-50	1
	038624-49	10
	038624-54	50
	038624-56	100
Native-CPG-500A	307424-50	1
	307424-49	10
	307424-54	50
	307424-56	100
Native-CPG-1000A	307524-50	1
	307524-49	10
	307524-54	50
	307524-56	100

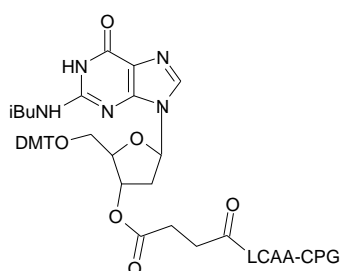
For further Packages, please inquire

Abbreviations

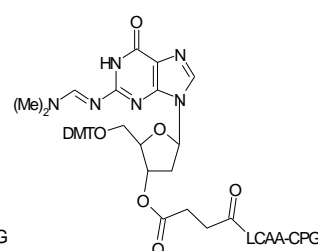
Ac	Acetyl	DMT	4,4' Dimethoxytrityl
Bz	Benzoyl	iBu	Isobutyryl
CPG	Controlled Pore Glass	iPr	Isopropyl
Dmf	Dimethylformamide	LCAA	Long Chain Alkyl Amine



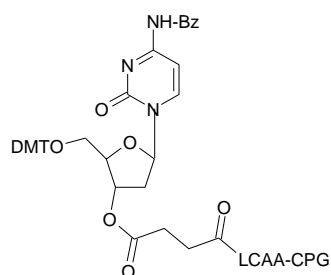
dA(Bz)-CPG



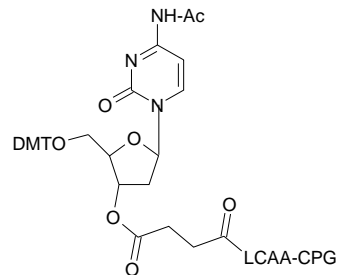
dG(iBu)-CPG



dG(dmf)-CPG



dC(Bz)-CPG



dC(Ac)-CPG

Synthesis support columns

Product	Catalog N° for ABI Snap type	Catalog N° for ABI Crimp type	Catalog N° for Expedite
50nmole 500A			
A base	400024-1U	405024-1U	415024-1U
C base	400124-1U	405124-1U	415124-1U
G base	400224-1U	405224-1U	415224-1U
T base	400324-1U	405324-1U	415324-1U
Kit - ea. A,C,G,T base	400424-1K	405424-1K	415424-1K
50nmole 1000A			
A base	400524-1U	405524-1U	415524-1U
C base	400624-1U	405624-1U	415624-1U
G base	400724-1U	405724-1U	415724-1U
T base	400824-1U	405824-1U	415824-1U
Kit - ea. A,C,G,T base	400924-1K	405924-1K	415924-1K
0.2µmole 500A			
A base	401024-1U	406024-1U	416024-1U
C base	401124-1U	406124-1U	416124-1U
G base	401224-1U	406224-1U	416224-1U
T base	401324-1U	406324-1U	416324-1U
Kit - ea. A,C,G,T base	401424-1K	406424-1K	416424-1K
0.2µmole 1000A			
A base	401524-1U	406524-1U	416524-1U
C base	401624-1U	406624-1U	416624-1U
G base	401724-1U	406724-1U	416724-1U
T base	401824-1U	406824-1U	416824-1U
Kit - ea. A,C,G,T base	401924-1K	406924-1K	416924-1K
1.0µmole 500A			
A base	402024-1U	407024-1U	417024-1U
C base	402124-1U	407124-1U	417124-1U
G base	402224-1U	407224-1U	417224-1U
T base	402324-1U	407324-1U	417324-1U
Kit - ea. A,C,G,T base	402424-1K	407424-1K	417424-1K
1.0µmole 1000A			
A base	402524-1U	407524-1U	417524-1U
C base	402624-1U	407624-1U	417624-1U
G base	402724-1U	407724-1U	417724-1U
T base	402824-1U	407824-1U	417824-1U
Kit - ea. A,C,G,T base	402924-1K	407924-1K	417924-1K

Solvents & reagents

Catalogue No	Item	Main specification		*Standard packages
010124	Acetic anhydride			
	Color (APHA)	max	10	1 L, 2.5 L,
	Assay (GC)	min	99%	25 L s/s
	Residue on evaporation	max	0.003%	200 L
	Oxydizable substances		Passes test	
273524	Acetic acid 20%			
	Appearance		Clear liquid	450 ml
	Assay (T)		19-21%	
	Residue on evaporation	max	0.001%	
012058	Acetonitrile Anhydrous- Diluent			
	Color (APHA)	max	5	100ml vial
	Assay (GC)	min	99.9%	250 ml
	Acidity (CH ₃ COOH)	max	0.002%	1 L, 2.5 L,
	Water (KF)	max	0.001%	25 L s/s
	Residue on evaporation	max	0.0003%	200 L s/s
	Oxydizable substances		Passes test	1400 L
012054	Acetonitrile Extra- dry (For washing)			
	Color (APHA)	max	5	100ml vial
	Assay (GC)	min	99.9%	250 ml
	Acidity (CH ₃ COOH)	max	0.002%	1 L, 2.5 L,
	Water (KF)	max	0.003%	25 L s/s
	Residue on evaporation	max	0.0003%	200 L s/s
	Oxydizable substances		Passes test	
273624	Acetonitrile 20%			
	Color (APHA)	max	10	200 ml
	Assay (T)		19-21%	
	Residue on evaporation		0.001%	
027024	5-Benzylthio-1H-Tetrazole			
	Assay (Titration)	min	99.5%	10 g - 1 kg
	Purity (HPLC)	min	99.8%	
	Solubility (0.25M, ACN)		Complete, clear colorless	
	Water (KF)	max	0.1%	
041024	Dichloroacetic acid (DCA)			
	Assay (Titration)	min	99.5%	1 kg - 10 kg
	Water (KF)	max	0.1%	
040524	1,2- Dichloroethane (DCE)			
	Color (APHA)	max	10	1 L, 2.5 L,
	Assay (GC)	min	99.8%	25 L s/s
	Acidity (HCl)	max	0.002%	200 L s/s
	Water (KF)	max	0.01%	
	Residue on evaporation	max	0.0005%	

Catalogue No	Item	Main specification	*Standard packages
137954	Dichloromethane (DCM)		
	Assay (GC)	min 99.9%	1 L, 2.5 L,
	Acidity (HCl)	max 0.0004%	25 L s/s
	Water (KF)	max 0.003%	200 L s/s
	Residue on evaporation	max 0.0005%	
	Amylene (as Stabilizer)	abt. 0.004%	
273424	Diethylamine 20% in Acetonitrile		
	Appearance	Clear liquid	200ml, 450ml
	Assay (T)	19-21%	
	Residue on evaporation	max 0.001%	
045224	4,5- Dicyanoimidazole (DCI)		
	Assay (Titration)	min 99.5%	10 g - 1 kg
	Purity (HPLC)	min 99.8%	
	Water (KF)	max 0.1%	
	Solubility(0.25M, ACN)	Complete, clear colorless	
205424	5-Ethylthio-1H-Tetrazole (ETT)		
	Assay (Titration)	min 99.5%	10 g - 1 kg
	Purity (HPLC)	min 99.8%	
	Water (KF)	max 0.1%	
	Solubility(0.25M, ACN)	Complete, clear colorless	
130224	N- Methylimidazole (NMI)		
	Color (APHA)	max 10	100 ml - 2.5 L
	Assay (GC)	min 99.5%	
	Water (KF)	max 0.03%	
135624	N- Methyl-2-Pyrrolidone (NMP)		
	Color (APHA)	max 10	1 L, 2.5 L
	Assay (GC)	min 99.9%	
	Water (KF)	max 0.02%	
202224	Tetrahydrofuran (THF)		
	Color (APHA)	max 10	1 L, 2.5 L,
	Assay (GC)	min 99.9%	25 L s/s
	Acidity (CH ₃ COOH)	max 0.003%	200 L s/s
	Water (KF)	max 0.005%	
	Residue on evaporation	max 0.0005%	
	Peroxides (as H ₂ O ₂)	max 0.01%	
202124	Trichloroacetic acid (TCA)		
	Assay (Titration)	min 99.5%	1 L, 2.5 L,
	Solubility (10%, Water)	Complete, clear	25 L
	Water (KF)	max 0.1%	
273724	Trifluoroacetic acid 3% (TFA)		
	Appearance	Clear liquid	450 ml
	Assay (T)	2.9-3.1%	
	Residue on evaporation	max 0.001%	

Ancillary reagents

Activator

Cat. No.	For Instrument	Components	Main Specification
Activator -1H-Tetrazole			
200824	ABI (380, 390Z, 391, 392, 394, 3400, 3948, 3900)	1H-Tetrazole 0.45M in Acetonitrile	1H-Tetrazole - 30-33 gr/L Water - max. 0.003%
200824	Beckman		
200524	Expedite (8900, 8909 & Moss)		
207124	Mermade		
200524	Polygene		
210224	Polyplex		
206924	Amersham (Oligopilot II & AKTA)	1H-Tetrazole 0.4M in Acetonitrile	1H-Tetrazole - 26.6-29.4 g/L Water - max. 0.005%
Activator -DCI			
047124	ABI	4,5-Dicyanoimidazole 0.25M in Acetonitrile	Assay (DCI) - 0.23-0.27M Water - max 0.003%
047124	Beckman		
045324	Expedite		
045924	Mermade		
045324	Polygene		
210424	Polyplex		
Activator -ETT			
205324	ABI	5-(Ethylthio)-1H-Tetrazole 0.25M in Acetonitrile	Assay (ETT) - 0.23-0.27M Water - max 0.003%
205324	Beckman		
205624	Expedite		
207024	Mermade		
205624	Polygene		
210324	Polyplex		
273824	Amersham (Oligopilot II & AKTA)		Assay (ETT) - 0.23-0.27M Water - max 0.005%
Activator -BTT			
203824	ABI	5-(Benzylthio)-1H-Tetrazole 0.25M in Acetonitrile	Assay (BTT) - 0.23-0.27M Water - max 0.003%
203824	Beckman		
212324	Expedite		
212424	Mermade		
212324	Polygene		
212524	Polyplex		
273924	Amersham (Oligopilot II & AKTA)	5-(Benzylthio)-1H-Tetrazole 0.30M in Acetonitrile	Assay (BTT) - 0.28-0.32M Water - max 0.005%

Cap A

Cat. No.	For Instrument	Components	Main Specification
035624 210524	ABI (380, 390Z, 391, 392, 394, 3400, 3948, 3900) Polyplex	Acetic anhydride 10% in Pyridine / Tetrahydrofurane 10:80 v/v/v	Acetic Anhydride - 9.5-10.5% Pyridine - 9.5-10.5% THF - 79-81% Water -max 0.01%
032324 032324 032724 210624	ABI Beckman Mermade Polyplex	Acetic anhydride 10% in Lutidine / Tetrahydrofurane 10:80 v/v/v	Acetic Anhydride - 9.5-10.5% Lutidine - 9.5-10.5% THF - 79-81% Water -max 0.01%
036824 036824	ABI Beckman	Phenoxyacetic anhydride 10% in Pyridine / Tetrahydrofurane 10:80 v/v/v	Phenoxyacetic anhyd.- 9.5-10.5% Pyridine - 9.5-10.5% THF - 79-81% Water -max 0.01%
033624 033624 210724	Expedite (8900, 8909, Moss) Polygene Polyplex	Acetic anhydride 10% in Tetrahydrofurane v/v	Acetic Anhydride - 9.5-10.5% Water - max. 0.01%
036924 036924	Expedite Polygene	Phenoxyacetic anhydride 10% in Tetrahydrofurane v/v	Phenoxyacetic anhyd.- 9.5-10.5% Water -max 0.01%
036124	Amersham (Oligopilot II & AKTA)	N-Methylimidazole 20% in Acetonitrile v/v	N-Methylimidazole -19.5-20.5% Water - max. 0.005%

Cap B

Cat. No.	For Instrument	Components	Main Specification
035724 035724 032824 210924	ABI (380, 390Z, 391, 392, 394, 3400, 3948, 3900) Beckman Mermade Polyplex	N-Methylimidazole 16% in Tetrahydrofurane v/v	N-Methylimidazole - 15.2-16.8% Water - max 0.01%
032424 032424 210824	ABI Beckman Polyplex	N-Methylimidazole 10% in Tetrahydrofurane v/v	N-Methylimidazole - 9.5-10.5% Water - max 0.01%
033524 033524 211024	Expedite (8900, 8909, Moss) Polygene Polyplex	N-Methylimidazole 10% in Pyridine/ Tetrahydrofurane 10:80 v/v/v	N-Methylimidazole - 9.5-10.5% Pyridine - 9.5-10.5% THF - 79-81% v/v Water - max 0.01%
037424 037524	Amersham (Oligopilot II & AKTA) Part B1 Part B2	B1- Acetic anhyd. 40% in Acetonitrile v/v B2- Lutidine 60% in Acetonitrile v/v	B1 - Acetic anhyd. - 39.5-40.5% Water - max 0.01% B2 - Lutidine - 59.5-60.5% Water - max 0.01%

Deblock

Cat. No.	For Instrument	Components	Main Specification
041324 047624 211424	Expedite (8900, 8909 & Moss), ABI ((380, 390Z, 391, 392, 394, 3400, 3948, 3900) Beckman Mermade Polyplex	Trichloroacetic acid 3% in Dichloromethane w/v	Trichloroacetic acid- 2.9-3.1% Water - max. 0.01%
043124 211324	ABI Polyplex	Dichloroacetic acid 3% in Dichloromethane v/v	Dichloroacetic acid - 2.9 - 3.1% Water - max. 0.01%
044124	ABI (390Z)	Dichloroacetic acid 2% in Dichloromethane v/v	Dichloroacetic acid -1.9-2.1% Water - max. 0.01%
047324 273224 273324	Amersham (Oligopilot II & AKTA)	Dichloroacetic acid 3% in Dichloromethane v/v Dichloroacetic acid 3% in Toluene v/v Dichloroacetic acid 5% in Toluene v/v	Dichloroacetic acid -2.9 - 3.1% Water - max. 0.005% Dichloroacetic acid -2.9 - 3.1% Water - max. 0.005% Dichloroacetic acid -4.9 - 5.1% Water - max. 0.005%
043324	Polygene	Trichloroacetic acid 3% in 1,2-Dichloroethane w/v	Trichloroacetic acid - 2.9-3.1% Water - max. 0.005%

Oxidizer

Cat. No.	For Instrument	Components	Main Specification
151024 150324 211124	ABI (380, 390Z, 391, 392, 394, 3400, 3948, 3900) Mermade Polyplex	Iodine 0.02M in THF / Pyridne / Water 70:20:10 v/v/v	Iodine - 4.8-5.5 g/l Pyridine - 19.5 -20.5% THF - 69.5 - 70.5%
150624	ABI	Iodine 0.1M in THF / Pyridne / Water 78:20:2 v/v/v	Iodine - 24.1-26.7 g/l Pyridine - 19.5.5-20.5% THF - 77.5-78.5%
152024 151624 150224 211224	ABI Polygene Mermade Polyplex	Iodine 0.1M in THF / Pyridne / Water 70:10:20 v/v/v	Iodine - 24.1-26.7 g/l Pyridine - 9.5.5-10.5% THF - 69.5-70.5%
150724	Amersham (Oligopilot II & AKTA)	Iodine 0.05M in Pyridne / Water 90:10 v/v	Iodine - 12.2 - 13.2 g/l
152124	Beckman	Iodine 3% in THF / Pyridne / Water 78:20:2 v/v/v	Iodine - 28.5-31.5 g/l Pyridine - 19.5.5-20.5% THF - 77.5-78.5%
150924	Expedite (8900, 8909, Moss)	Iodine 0.02M in THF / Pyridne / Water 89.6 : 0.4 : 10 v/v/v	Iodine - 4.8-5.5 g/l Pyridine - 0.36-0.44% THF - 89-90%
151824	Expedite (8900, 8909, Moss)	Iodine 0.02M in THF / Pyridne / Water 70:10:20 v/v/v	Iodine - 4.8-5.5 g/l Pyridine - 9.5.5-10.5% THF - 69.5-70.5%