



<https://nucleotech.bocsci.com/>

A grayscale image of a DNA double helix structure, serving as a background for the central text.

# Nucleosides & Nucleotides

International: 1-631-504-6093

US & Canada (Toll free): 1-844-BOC(262)-0123

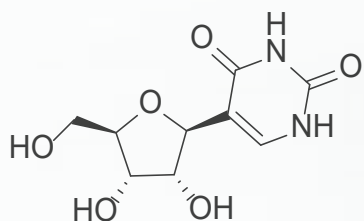
Fax: 1-631-614-7828    Email: [info@bocsci.com](mailto:info@bocsci.com)

 45-16 Ramsey Road, Shirley, NY 11967, USA

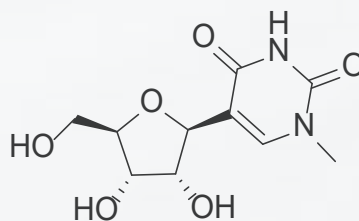
## Nucleosides and Nucleotides

BOC Sciences has strong capabilities in design, development, synthesis and production of nucleosides and nucleotides. Our skilled and experienced team is capable of providing the products in scales ranging from milligram, kilogram to hundreds kilogram quantities.

### Our superstars – PseudoUridine & N1-MethylpseudoUridine



&

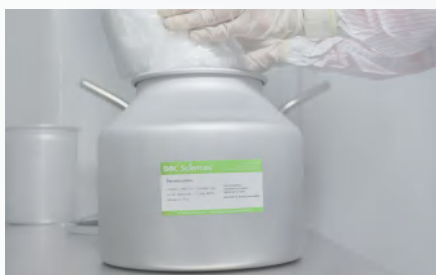
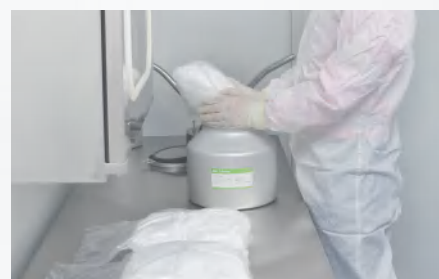


PseudoUridine  
CAS 1445-07-4  
Purity:  $\geq 99\%$   
Annual output over 500 kg

N1-MethylpseudoUridine  
CAS 13860-38-3  
Purity:  $\geq 99\%$   
Annual output over 1000 kg

### Competitive Advantages

- Guaranteed quality
- Competitive price
- Timely delivery
- Sufficient stock for catalog products
- Flexible packing options from vials to drums



PseudoUridine modification plays an important role in multiple biological processes. PseudoUridine modification could fine tune RNA functions for specific RNA species. For example, PseudoUridine in mRNA can affect mRNA splicing, stability and translation. In recent years, the role of pseudoUridine derivatives in the biological process has also been extensively studied. An example is that N1-methylpseudoUridine substituted mRNA can enhance protein expression and reduce immunogenicity with a more superior effect than PseudoUridine-incorporated mRNA.

## PseudoUridine derivatives under development

### Base modified pseudoUridine

Name	CAS No.
3-(3-Amino-3-Carboxypropyl)-1-MethylpseudoUridine	52777-29-4
1,3-DimethylpseudoUridine	64272-68-0
1,3-Dimethyl-2'-DeoxypseudoUridine	65358-16-9
3-MethylpseudoUridine	81691-06-7
1-MethylpseudoUridine	13860-38-3
N1-BenzylpseudoUridine	1613530-22-5
N1-EthylpseudoUridine	1613529-72-8
2-ThiopseudoUridine	59464-18-5
N1-(1,1-Difluoroethyl)pseudoUridine	N/A
N1-(1,1,1-Trifluoroethyl)pseudoUridine	1613529-80-8
N1-MethylsulfonylpseudoUridine	N/A
N1-(2-Methyl)propylpseudoUridine	N/A
N1-MethoxymethylpseudoUridine	N/A
N1,N3-Bis(cyanomethyl)pseudoUridine	N/A
N1-CyanomethylpseudoUridine	N/A
N1-Ethoxymethyl pseudoUridine	2131744-33-5

## 2'-modified pseudoUridine

Name	CAS No.
2'-O-MethylpseudoUridine	2140-68-3

## Protected pseudoUridine

Name	CAS No.
2',3'-Bis-O-(t-butyldimethylsilyl)-N1-methylpseudoUridine	N/A
5'-O-DMT-N1-methylpseudoUridine	875302-39-9

## Phosphate pseudoUridine

Name	CAS No.
PseudoUridine 5'-monophosphate	1157-60-4
2'-O-MethylpseudoUridine-5'-Triphosphate Lithium salt	N/A
N1-Methyl-2'-O-MethylpseudoUridine-5'-Triphosphate Lithium salt	N/A
N1-MethoxymethylpseudoUridine-5'-Triphosphate Lithium salt	N/A
N1-PropylpseudoUridine-5'-Triphosphate Lithium salt	N/A

## Phosphoramidite pseudoUridine

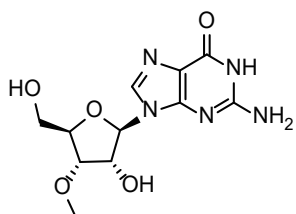
Name	CAS No.
2'-O-tert-Butyldimethylsilyl-5'-O-DMT-pseudoUridine 3'-CE phosphoramidite	163496-23-9
2'-Deoxy-5'-O-DMT-pseudoUridine 3'-CE phosphoramidite	289712-98-7
2'-O-tert-Butyldimethylsilyl-5'-O-DMT-N1-MethylpseudoUridine 3'-CE phosphoramidite	875302-45-7

## Nucleosides

These modified nucleosides play an extremely important role in the expression of biological functions of nucleic acids. Therefore, the existence of rare nucleosides has attracted the massive attention in academia and industrials. The correlated research in the field of vaccine and cancer is getting more funded and recognized.

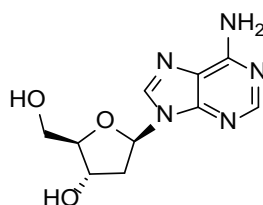
**3'-O-Methylguanosine**

10300-27-3



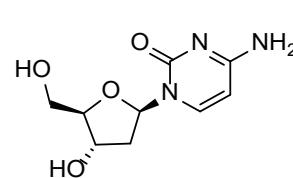
**2'-Deoxyadenosine**

958-09-8



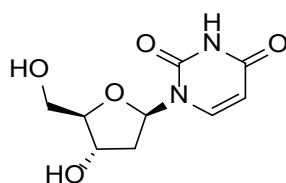
**2'-Deoxycytidine**

951-77-9



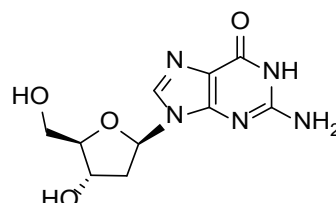
**2'-Deoxyuridine**

951-78-0



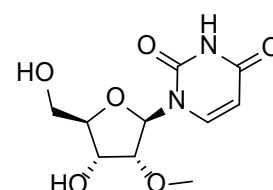
**2'-Deoxyguanosine**

961-07-9



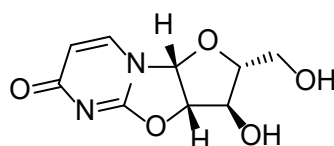
**2'-O-Methyluridine**

2140-76-3



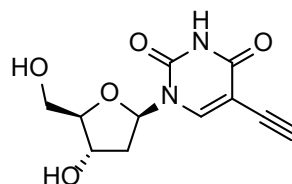
**2,2'-Cyclouridine**

3736-77-4



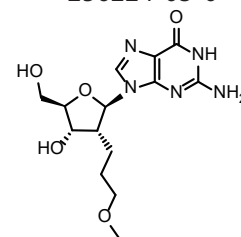
**5-Ethynyl-2'-Deoxyuridine**

61135-33-9



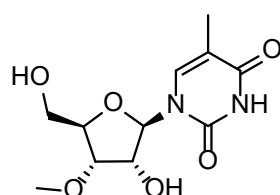
**3'-O-(2-Methoxyethyl)guanosine**

256224-03-0



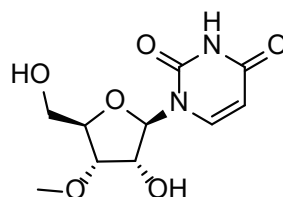
**3'-O-Methyl-5-methyluridine**

2305415-87-4



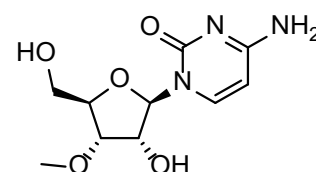
**3'-O-Methyluridine**

6038-59-1



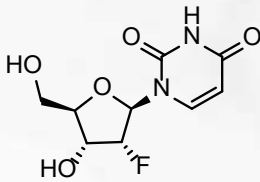
**3'-O-Methylcytidine**

20594-00-7

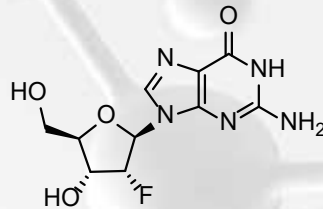


**2'-Deoxy-2'-Fluorouridine**

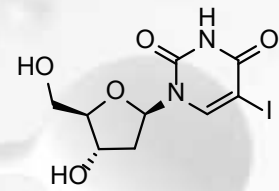
784-71-4

**2'-Deoxy-2'-Fluoroguanosine**

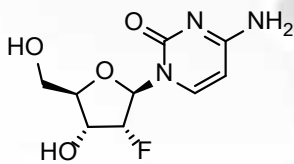
78842-13-4

**5-Iodo-2'-Deoxyuridine**

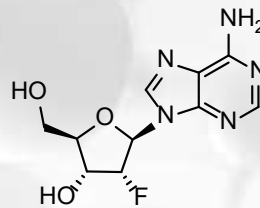
54-42-2

**2'-Deoxy-2'-Fluorocytidine**

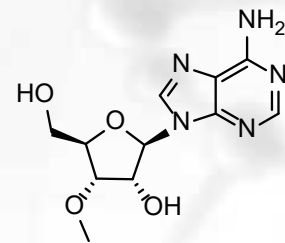
10212-20-1

**2'-Fluoro-2'-Deoxyadenosine**

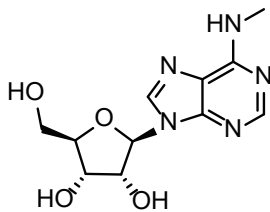
64183-27-3

**3'-O-Methyladenosine**

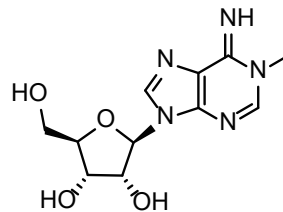
10300-22-8

**N6-Methyladenosine**

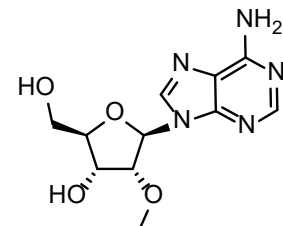
1867-73-8

**1-Methyladenosine**

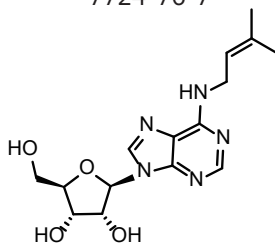
15763-06-1

**2'-O-Methyladenosine**

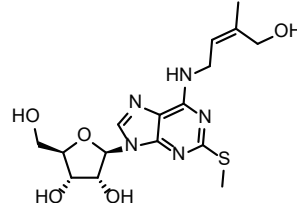
2140-79-6

**N6-(3-Methyl-2-Butenyl)Adenosine**

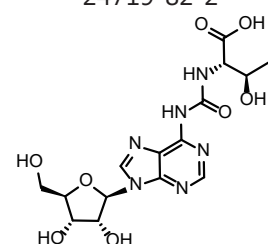
7724-76-7

**2-Methylthio-N6-(4-Hydroxy-3-Methylbut-2-Enyl)Adenosine**

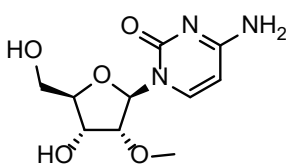
52049-48-6

**N6-ThreonylcarbamoylAdenosine**

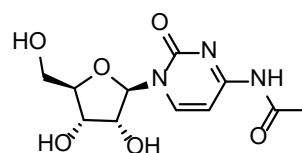
24719-82-2

**2'-O-Methylcytidine**

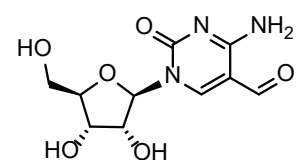
2140-72-9

**N4-Acetylcytidine**

3768-18-1

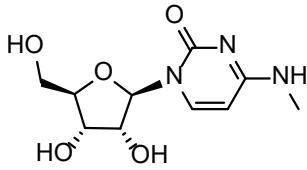
**5-Formylcytidine**

148608-53-1

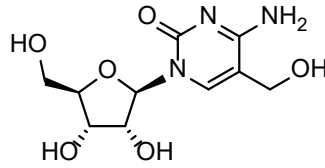


**N4-Methylcytidine**

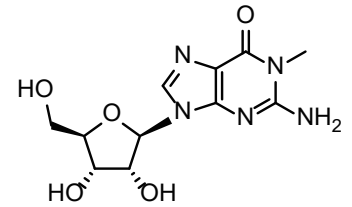
10578-79-7

**5-Hydroxymethylcytidine**

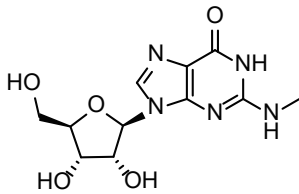
19235-17-7

**1-Methylguanosine**

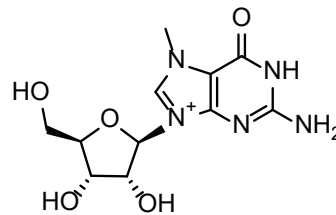
2140-65-0

**N2-Methylguanosine**

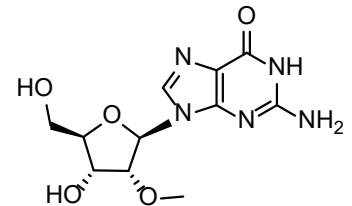
2140-77-4

**7-Methylguanosine**

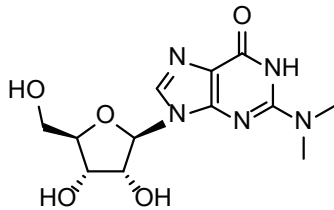
20244-86-4

**2'-O-Methylguanosine**

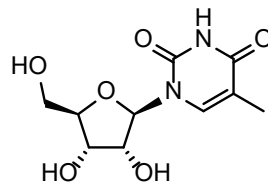
2140-71-8

**N,N-Dimethylguanosine**

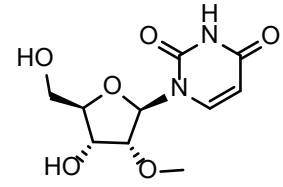
2140-67-2

**5-Methyluridine**

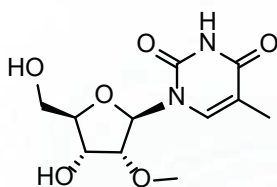
1463-10-1

**2'-O-Methyluridine**

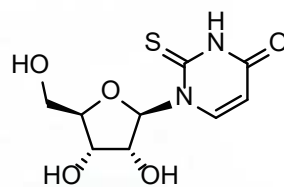
2140-76-3

**2'-O-Methyl-5-Methyluridine**

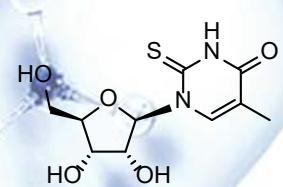
55486-09-4

**2-Thiouridine**

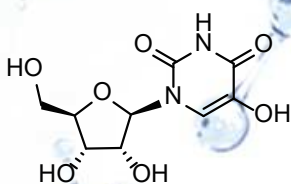
20235-78-3

**5-Methyl-2-Thiouridine**

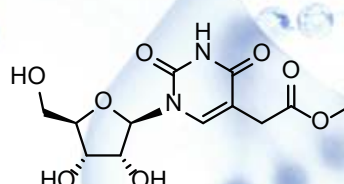
32738-09-3

**5-Hydroxyuridine**

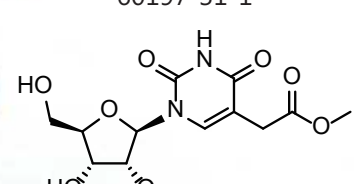
957-77-7

**5-Methoxycarbonylmethyluridine**

29428-50-0

**5-Methoxycarbonylmethyl-2'-O-Methyluridine**

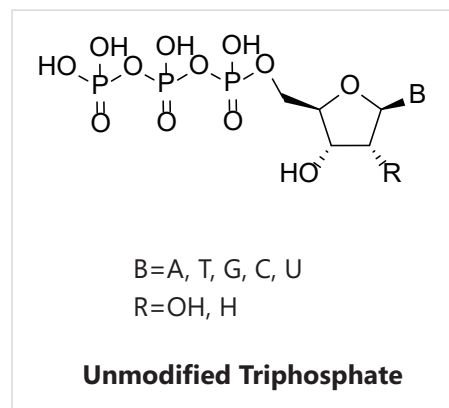
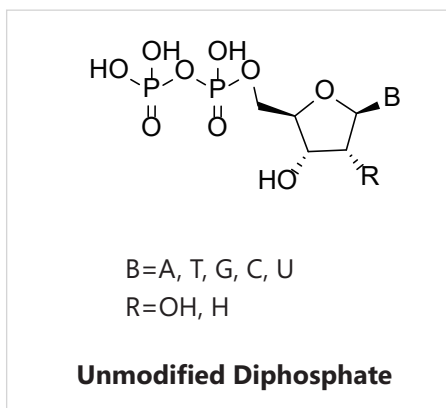
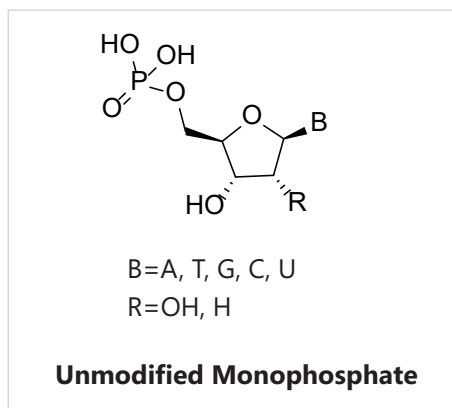
60197-31-1



## Nucleotides

BOC Sciences supplies nucleotides in scales ranging from kilogram to hundreds kilogram quantities. We provide a full list of dNMPs/NMPs, dNDPs/dNDPs and dNTPs/NTPs and could customize the specification to meet any requirements by customers. We also can supply the modified nucleotides according to the customers need.

### Unmodified Nucleotides



### Monophosphate Products (NMPs/dNMPs)

	Name	CAS No.
dAMP-2H	2'-Deoxyadenosine-5'-monophosphate	653-63-4
dAMP-2Na	2'-Deoxyadenosine-5'-monophosphate disodium salt	2922-74-9
dCMP-2H	2'-Deoxycytidine-5'-monophosphate	1032-65-1
dCMP-2Na	2'-Deoxycytidine-5'-monophosphate disodium salt	13085-50-2
dUMP-2Na	2'-Deoxyuridine-5'-monophosphate disodium salt	42155-08-8
dTMP-2Na	2'-Deoxythymidine-5'-monophosphate disodium salt	33430-62-5
dGMP-2Na	2'-Deoxyguanosine 5'-monophosphate disodium salt	33430-61-4
AMP	Adenosine 5'-monophosphate	61-19-8
AMP-2Na	Adenosine 5'-monophosphate disodium salt	4578-31-8
CMP	Cytidine-5'-monophosphate	63-37-6
CMP-2Na	Cytidine 5'-monophosphate disodium salt	6757-06-8
GMP-2Na	Guanosine 5'-monophosphate disodium salt	5550-12-9
UMP	Uridine-5'-monophosphate	58-97-9
UMP-2Na	Uridine 5'-monophosphate disodium salt	3387-36-8



## Diphosphate Products (NDPs/dNDPs)

	Name	CAS No.
ADP	Adenosine 5'-diphosphate	58-64-0
ADP-Na	Adenosine 5'-diphosphate monosodium salt	20398-34-9
ADP-2Na	Adenosine 5'-diphosphate disodium salt	16178-48-6
ADP-3Na	Adenosine-5'-diphosphate trisodium salt	2092-65-1
ADP-K	Adenosine 5'-diphosphate monopotassium salt	72696-48-1
ADP-2K	Adenosine 5'-diphosphate dipotassium salt	114702-55-5
ADP-3Li	Adenosine-5'-diphosphate trilithium salt	31008-64-7
CDP-2Na	Cytidine-5'-diphosphate disodium salt	54394-90-0
CDP-3Na	Cytidine 5'-Diphosphate Trisodium Salt	34393-59-4
GDP-2Na	Guanosine-5'-diphosphate disodium salt	7415-69-2
UDP-2Na	Uridine-5'-diphosphate disodium salt	27821-45-0
dADP-2Na	2'-Deoxyadenosine-5'-diphosphate disodium salt	72003-83-9
dGDP-3Na	2'-Deoxyguanosine-5'-Diphosphate Trisodium Salt	102783-74-4
dCDP-3Na	2'-Deoxycytidine-5'-diphosphate trisodium salt	151151-32-5
dUDP-2Na	2'-Deoxyuridine-5'-diphosphate disodium salt	102814-06-2
m7GDP [TEA Salt]	7-MethylGuanosine-5'-Diphosphate [TEA Salt]	117723-13-4 (free acid)

## Triphosphate Products (NTPs/dNTPs)

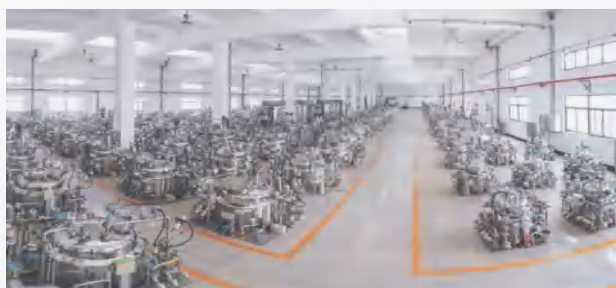
	Name	CAS No.
ATP	Adenosine-5'-triphosphate	56-65-5
ATP-2Na	Adenosine 5'-Triphosphate, disodium salt	987-65-5
CTP-2Na	Cytidine 5'-triphosphate disodium salt	36051-68-0
GTP-2Na	Guanosine-5,-triphosphoric acid disodium salt	56001-37-7
UTP-3Na	Uridine-5'-triphosphoric acid trisodium salt	19817-92-6
dATP-2Na	2'-Deoxyadenosine-5'-triphosphate disodium salt	74299-50-6
dATP-3Na	2'-Deoxyadenosine-5'-triphosphate Trisodium salt	54680-12-5
dTTP-3Na	2'-Deoxythymidine-5'-triphosphate, trisodium Salt	27821-54-1
dGTP-3Na	2'-Deoxyguanosine-5'-triphosphate trisodium salt	93919-41-6
dCTP-2Na	2'-Deoxycytidine 5'-triphosphate disodium salt	102783-51-7
dUTP	2'-Deoxyuridine 5'-Triphosphate	1173-82-6
Pseudo-UTP, Sodium salt	Pseudouridine-5'-triphosphate, sodium salt	1175-34-4 (for free acid)
N1-Methylpseudo-UTP, Sodium salt	N1-Methylpseudouridine-5'-triphosphate, sodium salt	1428903-59-6 (for free acid)
5-Methyl-UTP	5-methyluridine 5'-triphosphate	23198-01-8
5-Methoxy-UTP	5-Methoxyuridine 5'-triphosphate	847649-65-4
5-methyl-CTP	5-Methylcytidine 5'-triphosphate	327174-86-7
7-Deaza-dATP	7-Deaza-2'-Deoxyadenosine Triphosphate	N/A
7-Deaza-dGTP	7-Deaza-2'-Deoxyguanosine Triphosphate	101515-08-6

We can supply both solid and solution form triphosphate products

The solution form products are all free of DNase and RNase contamination and all have been passed the functionality test in transcription reaction

## Scale up capability

BOC Sciences with 3 Million sq.ft of facility area, has established powerful synthesis and fermentation platforms to produce high-quality chemicals.



BOC Sciences provides CDMO services for GMP grade products. Our facilities are US and EU GMP compliant and have passed US FDA inspection. Our manufacturing sites are equipped with hundreds of fermentors, reactors and multiple purification workshops.

### GMP capability:

- kg to MT scale
- Cleanroom Class 100 to Class 100,000,
- HPAPI production with OEL < 1  $\mu\text{g}/\text{m}^3$

## Contact Us

International: 1-631-504-6093

US & Canada (Toll free): 1-844-BOC(262)-0123

Fax: 1-631-614-7828

Email: [info@bocsci.com](mailto:info@bocsci.com)

45-16 Ramsey Road, Shirley, NY 11967, USA

<https://www.bocsci.com/>

