

# Chemistry - Green Chemistry

## Ionic Liquids

### Characteristics

An ionic liquid is a liquid that essentially contains only ions.

Ionic liquids are electrically conductive and have extremely low vapor pressure. Additional properties are diverse. Many have low combustibility, excellent thermal stability, a wide liquid range, and favorable solvating properties for diverse compounds. Many classes of chemical reactions, such as Diels-Alder & Friedel-Crafts reactions, can be performed using ionic liquids as solvents.

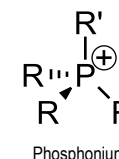
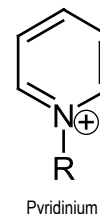
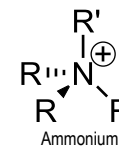
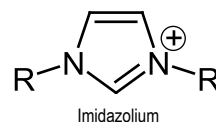
Recent work has shown that ionic liquids can serve as solvents for biocatalysis. Because of their distinctive properties, ionic liquids are attracting increasing attention in many fields, including organic chemistry, electrochemistry, catalysis, physical chemistry, and engineering.

### Safety and Green Chemistry

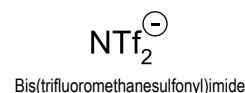
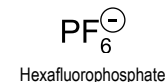
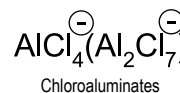
Due to their non-volatility (effectively eliminating a major pathway for environmental release and contamination), ionic liquids have been considered as having a low impact on the environment and human health, and thus recognized as solvents for green (environmental) chemistry.

Whilst maintaining the ability to dissolve a wide range of organic /inorganic compounds, the extremely low vapour pressures, thermal stability & non-flammable characteristics of ionic liquids (unlike volatile organic solvents), do not vaporise into the air & effectively eliminate a major route of environmental contamination.

### Cations



### Anions



R, R' : alkyl chain (Me, Et, Bu..., C12-C18).

# Chemistry - Green Chemistry

## Ionic Liquids : Acetates - Benzoates - Bromides

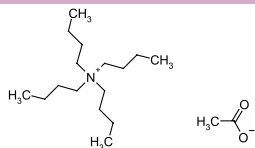
### Acetates Alkylammoniums

**IN498**

**Tetra-n-butylammonium acetate**

C<sub>18</sub>H<sub>39</sub>NO<sub>2</sub> MW 301,52

1g..... 5g



### Acetates Phosphoniums

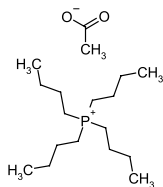
**JG593**

**Tetra-n-butylphosphonium acetate,**

**70% w/w in methanol**

C<sub>18</sub>H<sub>39</sub>O<sub>2</sub>P MW 318,48

100g..... 500g



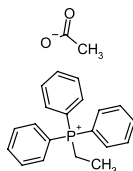
**JG633**

**Ethyltriphenylphosphonium acetate,**

**70% w/w in methanol**

C<sub>22</sub>H<sub>23</sub>O<sub>2</sub>P MW 350,40

100g..... 500g..... 2,5kg



### Benzoates Alkylammoniums

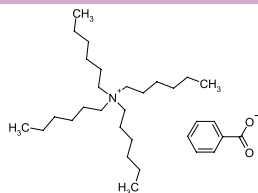
**36819**

**Tetrahexylammonium benzoate**

**75% in methanol**

C<sub>31</sub>H<sub>57</sub>NO<sub>2</sub> MW 475,81

1g..... 5g..... 25g



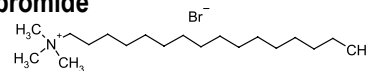
### Bromides Alkylammoniums

**12910**

**Hexadecyltrimethylammonium bromide**

C<sub>19</sub>H<sub>42</sub>BrN MW 364,46

100g..... 500g..... 5kg

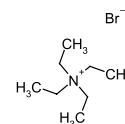


**04985**

**Tetraethylammonium bromide**

C<sub>8</sub>H<sub>20</sub>BrN MW 210,16

250g..... 1kg..... 5kg

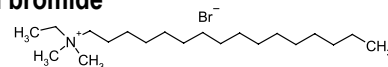


**25552**

**Cetyldimethylethylammonium bromide**

C<sub>20</sub>H<sub>44</sub>BrN MW 378,48

25g..... 100g..... 500g

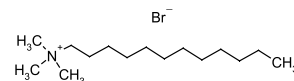


**30853**

**Dodecyltrimethylammonium bromide**

C<sub>15</sub>H<sub>34</sub>BrN MW 308,35

10g..... 50g..... 250g

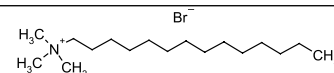


**25917**

**Tetradecyltrimethylammonium bromide**

C<sub>17</sub>H<sub>38</sub>BrN MW 336,40

25g..... 100g..... 500g

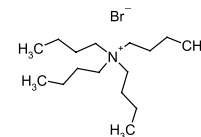


**07620**

**Tetrabutylammonium bromide**

C<sub>16</sub>H<sub>36</sub>BrN MW 322,38

100g..... 500g..... 2,5kg

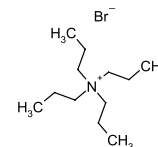


**15455**

**Tetrapropylammonium bromide**

C<sub>12</sub>H<sub>28</sub>BrN MW 266,27

500g..... 2,5kg



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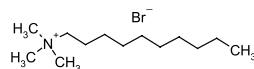
## Ionic Liquids : Bromides

**41492**

### Decyltrimethylammonium bromide

C13H30BrN MW 280,29

10g..... 50g

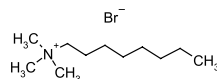


**31041**

### Trimethyloctylammonium bromide

C11H26BrN MW 252,24

5g..... 25g..... 100g

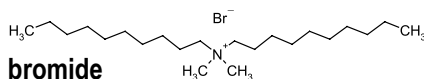


**B6426**

### Didecyldimethylammonium bromide

C22H48BrN MW 406,54

100g..... 500g

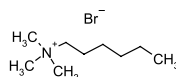


**A2318**

### N-hexyltrimethylammonium bromide

C9H22BrN MW 224,19

5g..... 25g

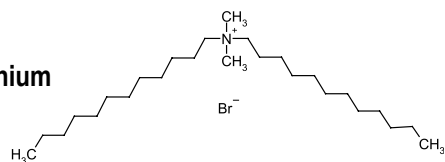


**38859**

### Didodecyldimethylammonium bromide

C26H56BrN MW 462,65

2g..... 10g

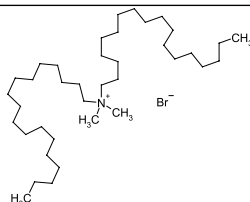


**36731**

### Dimethyldioctadecylammonium bromide

C38H80BrN MW 630,97

1g..... 5g

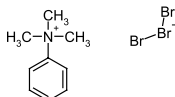


**04969**

### Phenyltrimethylammonium tribromide

C9H14Br3N MW 375,93

50g..... 250g..... 1kg

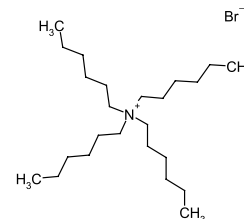


**15385**

### Tetrahexylammonium bromide

C24H52BrN MW 434,59

10g..... 50g..... 250g

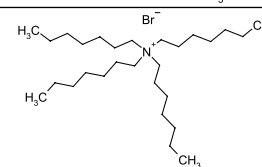


**15384**

### Tetraheptylammonium bromide

C28H60BrN MW 490,70

5g..... 25g..... 100g

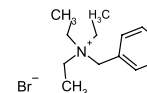


**05318**

### Benzyltriethylammonium bromide

C13H22BrN MW 272,23

25g..... 100g..... 500g

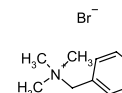


**05317**

### Benzyltrimethylammonium bromide

C10H16BrN MW 230,15

25g..... 100g

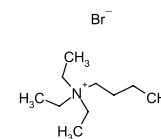


**C5476**

### Butyltriethylammonium bromide

C10H24BrN MW 238,21

25g..... 100g

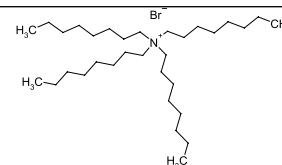


**15448**

### Tetraoctylammonium bromide

C32H68BrN MW 546,81

10g..... 50g..... 250g

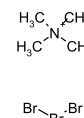


**15423**

### Tetramethylammonium tribromide

C4H12Br3N MW 313,86

25g..... 100g



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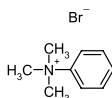
## Ionic Liquids : Bromides

04786

### Phenyltrimethylammonium bromide

C<sub>9</sub>H<sub>14</sub>BrN MW 216,12

25g..... 100g..... 500g

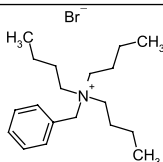


10656

### Benzyltributylammonium bromide

C<sub>19</sub>H<sub>34</sub>BrN MW 356,39

25g..... 50g..... 250g

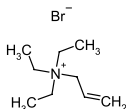


AH315

### Allyl triethylammonium bromide

C<sub>9</sub>H<sub>20</sub>BrN MW 222,17

10g..... 50g..... 250g

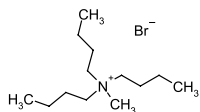


15640

### Tributyl methylammonium bromide

C<sub>13</sub>H<sub>30</sub>BrN MW 280,29

10g..... 50g..... 250g

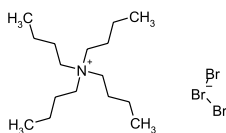


JE791

### Tetra-n-butylammonium tribromide, 95%

C<sub>16</sub>H<sub>36</sub>Br<sub>3</sub>N MW 482,18

25g..... 100g

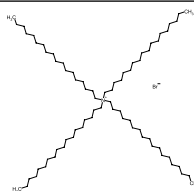


JB367

### Tetraoctadecylammonium bromide, 98%

C<sub>72</sub>H<sub>148</sub>BrN MW 1107,89

1g..... 5g

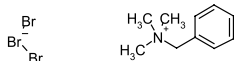


82827

### Benzyltrimethylammonium tribromide

C<sub>10</sub>H<sub>16</sub>Br<sub>3</sub>N MW 389,96

1g..... 5g..... 25g



## Bromides

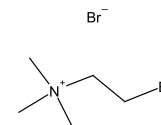
### Bromoalkylammoniums

04090

### (2-bromoethyl)trimethylammonium bromide

C<sub>5</sub>H<sub>13</sub>Br<sub>2</sub>N MW 246,97

10g..... 50g



## Bromides

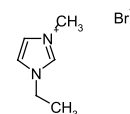
### Imidazoliums

CH576

### 1-ethyl-3-methylimidazolium bromide

C<sub>6</sub>H<sub>11</sub>BrN<sub>2</sub> MW 191,07

10g..... 50g

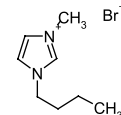


BJ260

### 1-butyl-3-methylimidazolium bromide

C<sub>8</sub>H<sub>15</sub>BrN<sub>2</sub> MW 219,13

5g

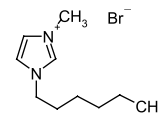


CH577

### 1-hexyl-3-methylimidazolium bromide

C<sub>10</sub>H<sub>19</sub>BrN<sub>2</sub> MW 247,18

25g

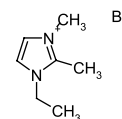


CH572

### 1-ethyl-2,3-dimethylimidazolium bromide

C<sub>7</sub>H<sub>13</sub>BrN<sub>2</sub> MW 205,10

25g

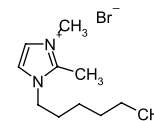


CH575

### 1-hexyl-2,3-dimethylimidazolium bromide

C<sub>11</sub>H<sub>21</sub>BrN<sub>2</sub> MW 261,21

25g



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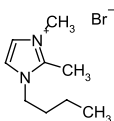
## Ionic Liquids : Bromides

**CH574**

**1-butyl-2,3-dimethylimidazolium bromide**

C<sub>9</sub>H<sub>17</sub>BrN<sub>2</sub> MW 233,15

25g



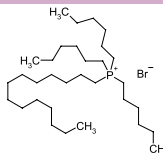
### Bromides Phosphoniums

**LE313**

**Trihexyl(tetradecyl)phosphonium bromide**

C<sub>32</sub>H<sub>68</sub>BrP MW 563,78

10g..... 50g

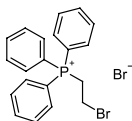


**AH480**

**(2-bromoethyl)triphenylphosphonium bromide**

C<sub>20</sub>H<sub>19</sub>Br<sub>2</sub>P MW 450,16

5g..... 25g..... 100g

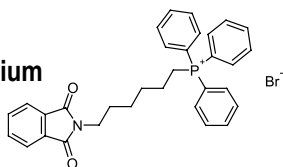


**AH515**

**6-phthalimidoethyl triphenylphosphonium bromide**

C<sub>32</sub>H<sub>31</sub>BrN<sub>2</sub>O<sub>2</sub>P MW 572,49

5g..... 25g..... 100g

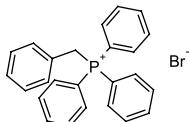


**A3756**

**Benzyltriphenylphosphonium bromide**

C<sub>25</sub>H<sub>22</sub>BrP MW 433,33

10g..... 250g

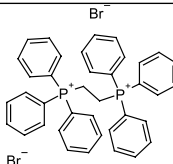


**36050**

**1,2-ethylenebis(triphenylphosphonium bromide)**

C<sub>38</sub>H<sub>34</sub>Br<sub>2</sub>P<sub>2</sub> MW 712,45

25g..... 100g

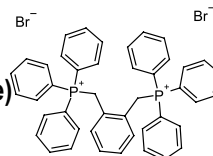


**81826**

**O-xylenebis(triphenylphosphoniumbromide)**

C<sub>44</sub>H<sub>38</sub>Br<sub>2</sub>P<sub>2</sub> MW 788,55

10g..... 50g

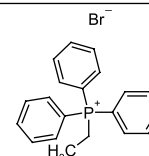


**01718**

**Ethyltriphenylphosphonium bromide**

C<sub>20</sub>H<sub>20</sub>BrP MW 371,26

25g..... 100g..... 500g

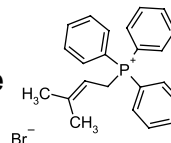


**67318**

**3,3-dimethylallyltriphenylphosphonium bromide**

C<sub>23</sub>H<sub>24</sub>BrP MW 411,33

5g..... 25g

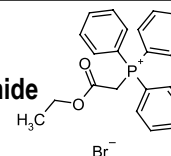


**00621**

**(carbethoxymethyl)triphenylphosphonium bromide**

C<sub>22</sub>H<sub>22</sub>BrO<sub>2</sub>P MW 429,30

25g..... 100g..... 500g

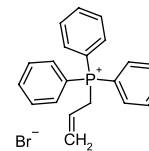


**00088**

**Allyltriphenylphosphonium bromide**

C<sub>21</sub>H<sub>20</sub>BrP MW 383,27

50g..... 250g

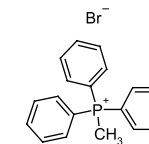


**04562**

**Methyl triphenylphosphonium bromide**

C<sub>19</sub>H<sub>18</sub>BrP MW 357,23

50g..... 250g..... 1kg

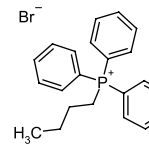


**00597**

**Butyltriphenyl phosphonium bromide**

C<sub>22</sub>H<sub>24</sub>BrP MW 399,31

25g..... 100g..... 500g



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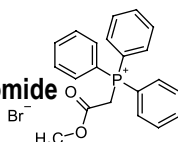
## Ionic Liquids : Bromides

**62530**

**Carbomethoxymethyl-triphenylphosphonium bromide**

C<sub>21</sub>H<sub>20</sub>BrO<sub>2</sub>P MW 415,27

25g..... 100g..... 500g

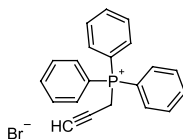


**14914**

**Propargyltriphenylphosphonium bromide**

C<sub>21</sub>H<sub>18</sub>BrP MW 381,26

5g..... 25g..... 100g

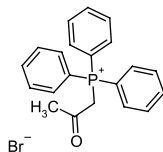


**C7767**

**Acetonyltriphenylphosphonium bromide**

C<sub>21</sub>H<sub>20</sub>BrOP MW 399,27

5g..... 25g

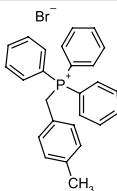


**C7790**

**4-methylbenzyltriphenylphosphonium bromide**

C<sub>26</sub>H<sub>24</sub>BrP MW 447,36

5g..... 25g

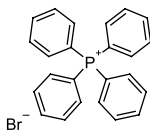


**15453**

**Tetraphenylphosphonium bromide**

C<sub>24</sub>H<sub>20</sub>BrP MW 419,30

10g..... 50g..... 100g

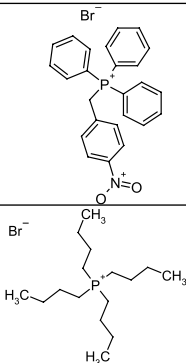


**C7792**

**4-nitrobenzyltriphenylphosphonium bromide**

C<sub>25</sub>H<sub>21</sub>BrNO<sub>2</sub>P MW 478,33

5g..... 25g

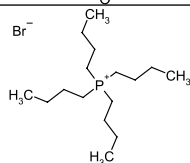


**07322**

**Tetrabutylphosphonium bromide**

C<sub>16</sub>H<sub>36</sub>BrP MW 339,34

25g..... 100g

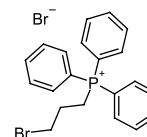


**04782**

**(3-bromopropyl)triphenylphosphonium bromide**

C<sub>21</sub>H<sub>21</sub>Br<sub>2</sub>P MW 464,18

25g..... 100g

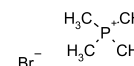


**AG548**

**Tetramethylphosphonium bromide**

C<sub>4</sub>H<sub>12</sub>BrP MW 171,02

1g..... 5g

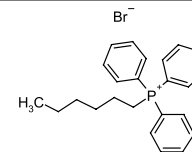


**C7761**

**Hexyltriphenylphosphonium bromide**

C<sub>24</sub>H<sub>28</sub>BrP MW 427,37

25g..... 100g..... 500g

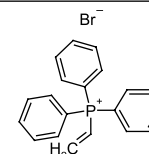


**05456**

**Vinyltriphenylphosphonium bromide**

C<sub>20</sub>H<sub>18</sub>BrP MW 369,24

5g..... 25g..... 100g

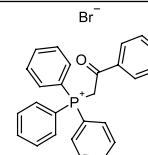


**05503**

**Phenacyltriphenylphosphonium bromide**

C<sub>26</sub>H<sub>22</sub>BrOP MW 461,34

5g..... 25g..... 100g

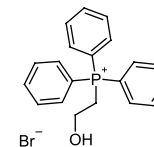


**C7786**

**2-hydroxyethyltriphenylphosphonium bromide**

C<sub>20</sub>H<sub>20</sub>BrOP MW 387,26

25g..... 100g

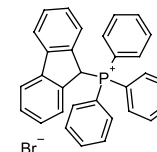


**AZ091**

**(9-fluorenyl)triphenylphosphonium bromide**

C<sub>31</sub>H<sub>24</sub>BrP MW 507,41

1g..... 5g





# Chemistry - Green Chemistry

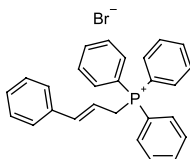
## Ionic Liquids : Bromides

**39624**

### Cinnamyltriphenylphosphonium bromide

C27H24BP<sup>+</sup> MW 459,37

25g..... 100g

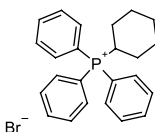


**19676**

### Cyclohexyltriphenylphosphoniumbromide

C24H26BrP<sup>+</sup> MW 425,35

5g..... 25g..... 100g

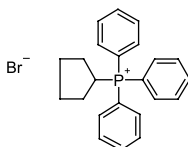


**C7779**

### Cyclopentyltriphenylphosphonium bromide

C23H24BrP<sup>+</sup> MW 411,33

10g..... 50g..... 250g

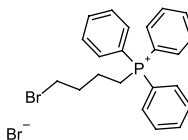


**E9702**

### 4-bromobutyl triphenylphosphonium bromide

C22H23Br2P<sup>+</sup> MW 478,21

10g..... 50g

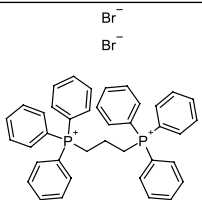


**C7797**

### Trimethylene-bistriphenylphosphonium bromide

C39H36Br2P2<sup>+</sup> MW 726,48

5g..... 25g..... 100g

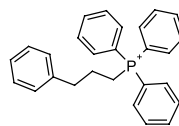


**81821**

### 3-phenylpropyltriphenylphosphonium bromide

C27H26BrP<sup>+</sup> MW 461,39

10g..... 50g..... 250g

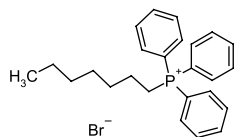


**C7762**

### Heptyltriphenylphosphonium bromide

C25H30BrP<sup>+</sup> MW 441,40

5g..... 25g

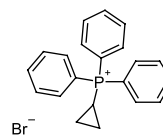


**05844**

### Cyclopropyltriphenylphosphonium bromide

C21H20BrP<sup>+</sup> MW 383,27

5g..... 25g..... 100g

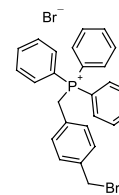


**AG536**

### {4-(bromomethyl)benzyl}triphenylphosphonium bromide

C26H23Br2P<sup>+</sup> MW 526,26

25g..... 100g..... 500g

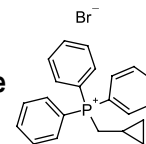


**C7780**

### Cyclopropylmethyltriphenylphosphonium bromide

C22H22BrP<sup>+</sup> MW 397,30

5g..... 25g

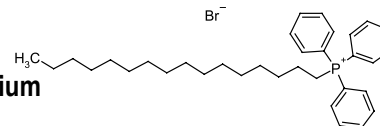


**29821**

### Hexadecyltriphenylphosphonium bromide

C34H48BrP<sup>+</sup> MW 567,64

10g..... 5g..... 100g

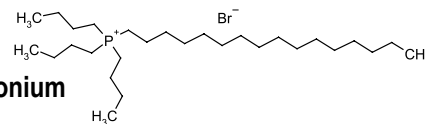


**12909**

### Hexadecyltributylphosphonium bromide

C28H60BrP<sup>+</sup> MW 507,67

5g..... 25g..... 100g

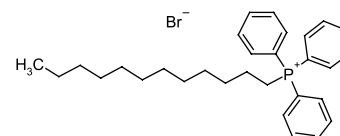


**R7223**

### Dodecyl(triphenyl)phosphonium bromide

C30H40BrP<sup>+</sup> MW 511,53

10g..... 50g..... 250g



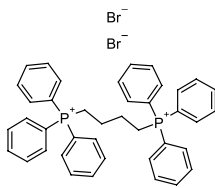
# Chemistry - Green Chemistry

## Ionic Liquids : Bromides

**C7796**

**Tetramethylene-bistriphenylphosphonium bromide**

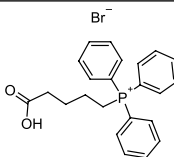
C<sub>40</sub>H<sub>38</sub>Br<sub>2</sub>P<sub>2</sub> MW 740,50  
10g..... 50g..... 250g



**05885**

**(4-carboxybutyl)triphenylphosphonium bromide**

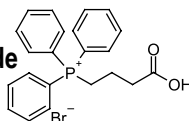
C<sub>23</sub>H<sub>24</sub>BrO<sub>2</sub>P MW 443,32  
25g..... 100g..... 500g



**C6756**

**3-carboxypropyl triphenyl phosphonium bromide**

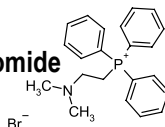
C<sub>22</sub>H<sub>22</sub>BrO<sub>2</sub>P MW 429,30  
25g..... 100g..... 500g



**25795**

**2-(dimethylaminoethyl)triphenylphosphonium bromide**

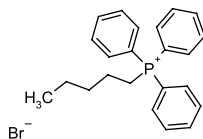
C<sub>22</sub>H<sub>25</sub>BrNP MW 414,33  
10g..... 50g



**C7760**

**Pentyltriphenylphosphonium bromide**

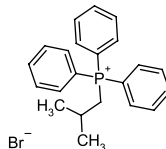
C<sub>23</sub>H<sub>26</sub>BrP MW 413,34  
25g..... 100g..... 500g



**D0999**

**Isobutyltriphenylphosphonium bromide**

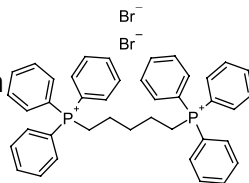
C<sub>22</sub>H<sub>24</sub>BrP MW 399,31  
5g..... 25g..... 100g



**AZ097**

**Pentamethylenebis(triphenylphosphonium bromide)**

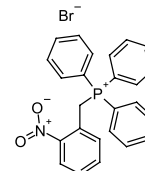
C<sub>41</sub>H<sub>40</sub>Br<sub>2</sub>P<sub>2</sub> MW 754,53  
5g..... 25g



**C7791**

**2-nitrobenzyltriphenylphosphonium bromide**

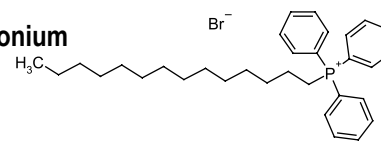
C<sub>25</sub>H<sub>21</sub>BrNO<sub>2</sub>P MW 478,33  
2g..... 10g



**C7795**

**N-tetradecyltriphenylphosphonium bromide**

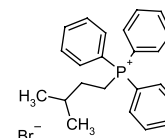
C<sub>32</sub>H<sub>44</sub>BrP MW 539,59  
25g..... 100g



**94328**

**2-[(4-methylphenyl)thio]nicotinamide**

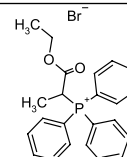
C<sub>23</sub>H<sub>26</sub>BrP MW 413,34  
10g..... 50g..... 250g



**84840**

**Carboethoxyethyl triphenylphosphonium bromide**

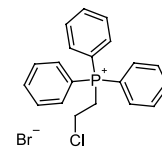
C<sub>23</sub>H<sub>24</sub>BrO<sub>2</sub>P MW 443,32  
25g..... 100g..... 500g



**C7776**

**2-chloroethyltriphenylphosphonium bromide**

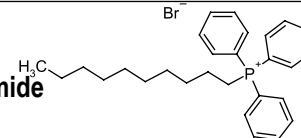
C<sub>20</sub>H<sub>19</sub>BrClP MW 405,71  
10g..... 50g



**AH014**

**N-decyl triphenylphosphonium bromide**

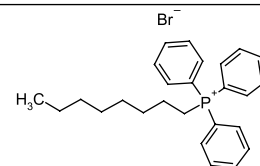
C<sub>28</sub>H<sub>36</sub>BrP MW 483,48  
25g..... 100g..... 500g



**C7763**

**Octyltriphenylphosphonium bromide**

C<sub>26</sub>H<sub>32</sub>BrP MW 455,42  
5g..... 25g..... 100g





# Chemistry - Green Chemistry

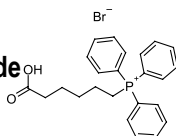
## Ionic Liquids : Bromides

**72970**

**(5-carboxypentyl)(triphenyl)phosphonium bromide**

C24H26BrO2P MW 457,35

1g..... 5g

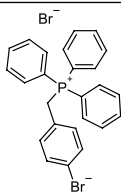


**C6213**

**((4-bromophenyl)methyl)triphenylphosphonium bromide**

C25H21Br2P MW 512,23

5g

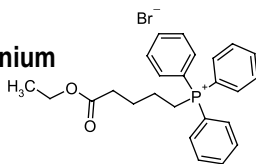


**AZ212**

**(4-ethoxycarbonylbutyl)triphenylphosphonium bromide**

C25H28BrO2P MW 471,38

5g..... 25g

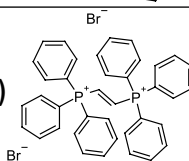


**AZ095**

**1,2-vinylenebis(triphenylphosphonium bromide)**

C38H32Br2P2 MW 710,43

10g..... 50g

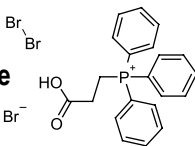


**AH098**

**2-carboxyethyltriphenylphosphoniumtribromide**

C21H20Br3O2P MW 575,08

25g

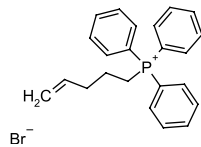


**C7794**

**4-pentenyltriphenylphosphonium bromide**

C23H24BrP MW 411,33

1g..... 5g..... 25g

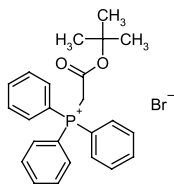


**CH934**

**(tert-butoxycarbonylmethyl)triphenylphosphonium bromide**

C24H26BrO2P MW 457,35

5g

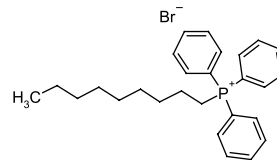


**C7793**

**N-nonyltriphenylphosphonium bromide**

C27H34BrP MW 469,45

5g..... 25g

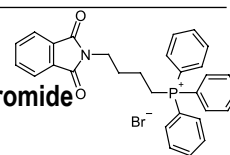


**AH288**

**4-phthalimidobutyl triphenylphosphonium bromide**

C30H27BrNO2P MW 544,43

5g..... 25g..... 100g

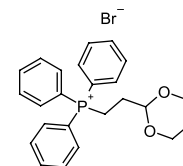


**25803**

**2-(1,3-dioxan-2-yl)ethyltriphenylphosphonium bromide**

C24H26BrO2P MW 457,35

5g..... 25g

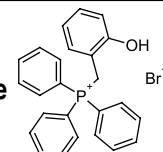


**31452**

**(2-hydroxybenzyl)triphenylphosphonium bromide**

C25H22BrOP MW 449,33

10g..... 50g

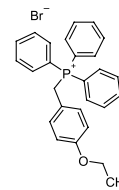


**54330**

**(4-ethoxybenzyl)triphenylphosphonium bromide**

C27H26BrOP MW 477,39

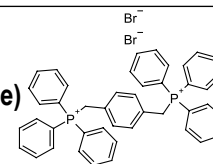
5g..... 25g



**03216**

**P-xylylenebis(triphenylphosphonium bromide)**

C44H38Br2P2 MW 788,55



# Chemistry - Green Chemistry

## Ionic Liquids : Bromides - Chlorides

### Bromides Pyridiniums

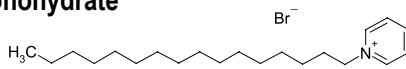
**12907**

**Cetylpyridinium bromide monohydrate**

C<sub>21</sub>H<sub>38</sub>BrN

MW 384,45

50g



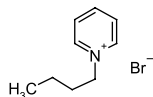
**M0729**

**1-n-butylpyridinium bromide**

C<sub>9</sub>H<sub>14</sub>BrN

MW 216,12

5g..... 25g



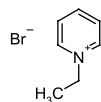
**AG549**

**1-ethylpyridinium bromide**

C<sub>7</sub>H<sub>10</sub>BrN

MW 188,07

25g..... 100g..... 500g



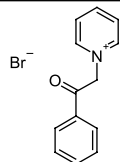
**AH289**

**N-phenacylpyridinium bromide**

C<sub>13</sub>H<sub>12</sub>BrNO

MW 278,15

10g..... 50g



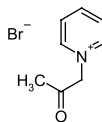
**AH442**

**N-acetylpyridinium bromide**

C<sub>8</sub>H<sub>10</sub>BrNO

MW 216,08

2g..... 10g..... 50g



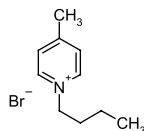
**CH872**

**1-butyl-4-methylpyridinium bromide**

C<sub>10</sub>H<sub>16</sub>BrN

MW 230,15

5g..... 25g



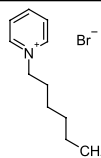
**CH578**

**1-hexylpyridinium bromide**

C<sub>11</sub>H<sub>18</sub>BrN

MW 244,18

25g



### Chlorides Ammoniums

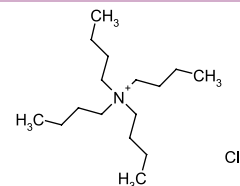
**JE027**

**Tetra-n-butylammonium chloride,  
50% w/w aq. soln.**

C<sub>16</sub>H<sub>36</sub>ClN

MW 277,93

5g..... 25g



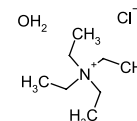
**03940**

**Tetraethylammonium chloride monohydrate**

C<sub>8</sub>H<sub>22</sub>ClNO

MW 183,72

25g..... 100g..... 500g



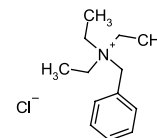
**05300**

**Benzyltriethylammonium chloride**

C<sub>13</sub>H<sub>22</sub>ClN

MW 227,78

100g..... 500g



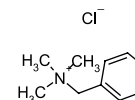
**10659**

**Benzyltrimethylammonium chloride**

C<sub>10</sub>H<sub>16</sub>ClN

MW 185,70

100g..... 500g..... 2,5kg



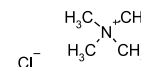
**02945**

**Tetramethylammonium chloride**

C<sub>4</sub>H<sub>12</sub>ClN

MW 109,60

250g..... 1kg..... 5kg



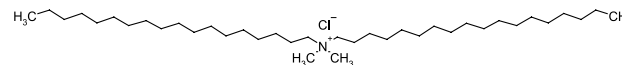
**42665**

**Di-octadecyldimethylammonium chloride**

C<sub>38</sub>H<sub>80</sub>ClN

MW 586,52

50g..... 250g..... 1kg



# Chemistry - Green Chemistry

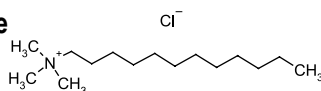
## Ionic Liquids : Chlorides

**38858**

### Dodecyltrimethylammonium chloride

C15H34ClN MW 263,90

5g..... 25g..... 100g

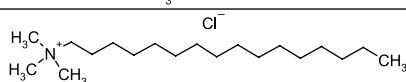


**IN580**

### Hexadecyltrimethylammonium chloride , 95+%

C19H42ClN MW 320,01

5g..... 25g..... 100g

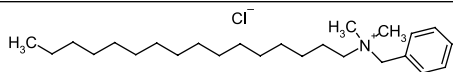


**JE346**

### Benzylcetyldimethylammonium chloride hydrate, 95%

C25H46ClN MW 396,11

10g..... 50g..... 250g

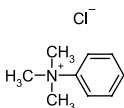


**08050**

### Phenyltrimethylammonium chloride

C9H14ClN MW 171,67

100g..... 500g

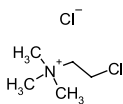


**11307**

### 2-chloroethyltrimethylammonium chloride

C5H13Cl2N MW 158,07

5g..... 25g..... 100g

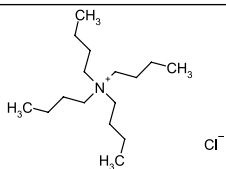


**15343**

### Tetrabutylammonium chloride

C16H36ClN MW 277,93

25g..... 100g

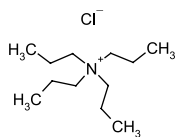


**39945**

### Tetra-propylammonium chloride

C12H28ClN MW 221,82

1g..... 5g..... 25g



**51477**

### Tetradecyltrimethylammonium chloride

C17H38ClN MW 291,95

5g..... 25g

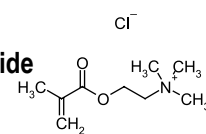


**C8415**

### Dimethylaminoethyl methacrylate methylchloride

C9H18ClNO2 MW 207,70

100g..... 500g

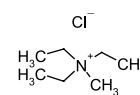


**JE129**

### Triethylmethylammonium chloride, 98%

C7H18ClN MW 151,68

50g

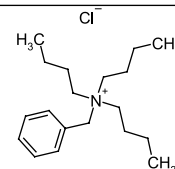


**07676**

### Benzyltributylammonium chloride

C19H34ClN MW 311,94

100g..... 500g..... 2,5kg

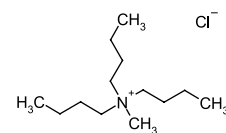


**15641**

### Tributyl methylammonium chloride

C13H30ClN MW 235,84

10g..... 100g..... 500g



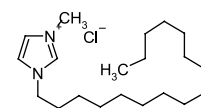
## Chlorides Imidazoliums

**CH592**

### 1-hexadecyl-3-methylimidazolium chloride monohydrate

C20H39ClN2 MW 343,00

10g



# Chemistry - Green Chemistry

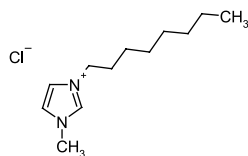
## Ionic Liquids : Chlorides

**CH585**

**1-octyl-3-methylimidazolium chloride**

C<sub>12</sub>H<sub>23</sub>ClN<sub>2</sub> MW 230,78

25g

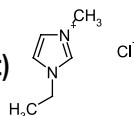


**U3109**

**1-ethyl-3-methylimidazolium chloride (for molten salt)**

C<sub>6</sub>H<sub>11</sub>ClN<sub>2</sub> MW 146,62

5g..... 25g..... 250g

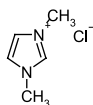


**CH856**

**1,3-dimethylimidazolium chloride**

C<sub>5</sub>H<sub>9</sub>ClN<sub>2</sub> MW 132,59

5g

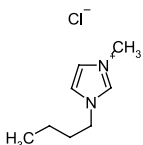


**BJ261**

**1-butyl-3-methylimidazolium chloride**

C<sub>8</sub>H<sub>15</sub>ClN<sub>2</sub> MW 174,68

5g..... 10g..... 50g

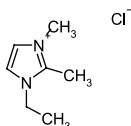


**CH579**

**1-ethyl-2,3-dimethylimidazolium chloride**

C<sub>7</sub>H<sub>13</sub>ClN<sub>2</sub> MW 160,65

25g

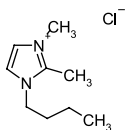


**CH580**

**1-butyl-2,3-dimethylimidazolium chloride**

C<sub>9</sub>H<sub>17</sub>ClN<sub>2</sub> MW 188,70

5g..... 25g

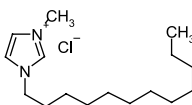


**CH587**

**1-dodecyl-3-methylimidazolium chloride**

C<sub>16</sub>H<sub>31</sub>ClN<sub>2</sub> MW 286,89

10g

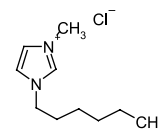


**CH584**

**1-hexyl-3-methylimidazolium chloride**

C<sub>10</sub>H<sub>19</sub>ClN<sub>2</sub> MW 202,73

5g..... 25g

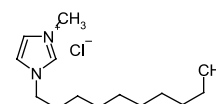


**CH586**

**1-decyl-3-methylimidazolium chloride**

C<sub>14</sub>H<sub>27</sub>ClN<sub>2</sub> MW 258,84

10g

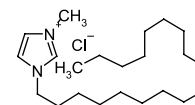


**CH593**

**1-octadecyl-3-methylimidazolium chloride**

C<sub>22</sub>H<sub>43</sub>ClN<sub>2</sub> MW 371,05

10g

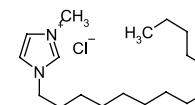


**CH589**

**1-tetradecyl-3-methylimidazolium chloride**

C<sub>18</sub>H<sub>35</sub>ClN<sub>2</sub> MW 314,95

10g



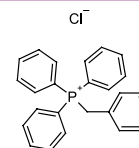
## Chlorides Phosphoniums

**10662**

**Benzyl(triphenyl)phosphonium chloride**

C<sub>25</sub>H<sub>22</sub>ClP MW 388,88

25g..... 100g..... 500g

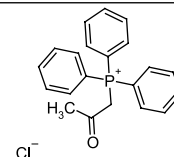


**05891**

**Acetyltriphenylphosphonium chloride**

C<sub>21</sub>H<sub>20</sub>ClOP MW 354,82

25g..... 100g..... 500g

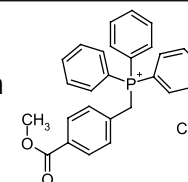


**AH214**

**4-carbomethoxybenzyl triphenylphosphonium chloride**

C<sub>27</sub>H<sub>24</sub>ClO<sub>2</sub>P MW 446,92

1g..... 5g..... 25g



# Chemistry - Green Chemistry

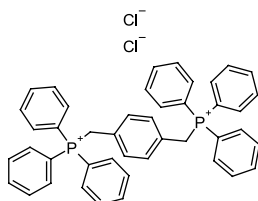
## Ionic Liquids : Chlorides

**C7799**

**P-xylenebis  
(triphenylphosphoniumchloride)**

C44H38Cl<sub>2</sub>P<sub>2</sub> MW 699,65

5g..... 25g

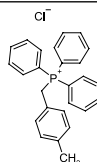


**C6227**

**4-methylbenzyltriphenylphosphonium chloride**

C26H24ClP MW 402,91

10g..... 50g..... 250g

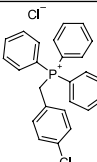


**C7775**

**4-chlorobenzyltriphenylphosphonium chloride**

C25H21Cl<sub>2</sub>P MW 423,33

25g..... 100g..... 500g

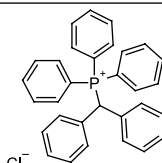


**C7768**

**Benzhydryl triphenylphosphonium chloride**

C31H26ClP MW 464,98

25g..... 100g

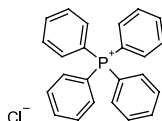


**15454**

**Tetraphenylphosphonium chloride**

C24H20ClP MW 374,85

10g..... 50g

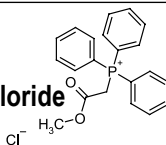


**33982**

**((carbomethoxy)methyl)triphenylphosphonium chloride**

C21H20ClO<sub>2</sub>P MW 370,82

50g..... 250g

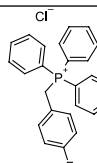


**57069**

**4-fluorobenzyltriphenylphosphonium chloride**

C25H21ClFP MW 406,87

5g..... 25g..... 100g

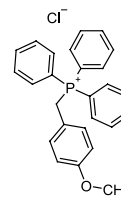


**B3570**

**4-methoxybenzyltriphenylphosphonium chloride**

C26H24ClOP MW 418,91

10g..... 50g

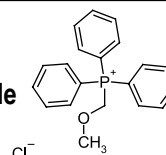


**03443**

**(methoxymethyl)(triphenyl)phosphonium chloride**

C20H20ClOP MW 342,81

25g..... 100g..... 500g

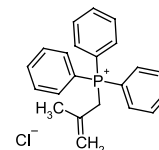


**C7788**

**2-methylallyltriphenylphosphonium chloride**

C22H22ClP MW 352,85

10g..... 50g..... 250g

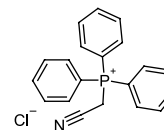


**92475**

**Cyanomethyltriphenylphosphonium chloride**

C20H17ClNP MW 337,79

5g..... 25g..... 100g

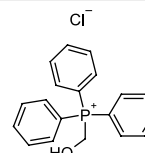


**B3562**

**Hydroxymethyltriphenylphosphonium chloride**

C19H18ClOP MW 328,78

10g..... 50g..... 250g

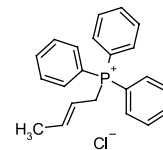


**U9686**

**(2-butenyl)triphenylphosphonium chloride**

C22H22ClP MW 352,85

5g..... 25g

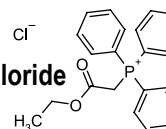


**09989**

**Ethoxycarbonylmethyltriphenylphosphonium chloride**

C22H22ClO<sub>2</sub>P MW 384,85

5g..... 25g..... 100g



# Chemistry - Green Chemistry

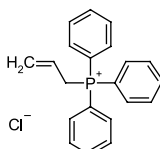
## Ionic Liquids : Chlorides

**10196**

**Allyl(triphenyl)phosphonium chloride**

C21H20ClP MW 338,82

25g..... 100g..... 500g

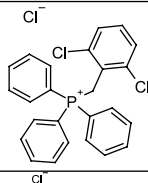


**AG541**

**2,6-dichlorobenzyl triphenylphosphonium chloride**

C25H20Cl3P MW 457,77

5g..... 25g..... 100g

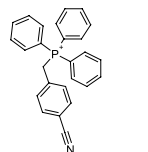


**40648**

**(4-cyanobenzyl)triphenylphosphonium chloride**

C26H21ClNP MW 413,89

5g..... 25g

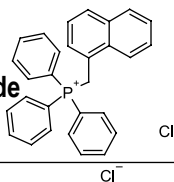


**AZ025**

**(1-naphthylmethyl)triphenylphosphonium chloride**

C29H24ClP MW 438,94

5g..... 25g

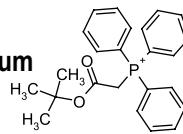


**40525**

**(tert-butoxycarbonylmethyl)triphenylphosphonium**

C24H26ClO2P MW 412,90

5g..... 25g..... 100g

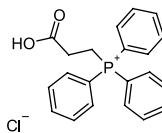


**AH566**

**(2-carboxyethyl)triphenylphosphonium chloride**

C21H20ClO2P MW 370,82

5g..... 25g..... 100g

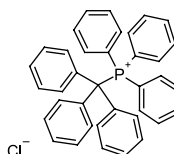


**AH268**

**Triphenylmethyl triphenylphosphonium chloride**

C37H30ClP MW 541,08

10g..... 50g..... 250g

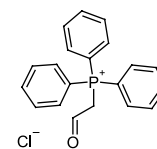


**12645**

**Formylmethyltriphenylphosphonium chloride**

C20H18ClOP MW 340,79

10g..... 50g

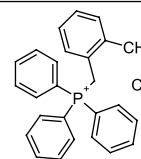


**C6225**

**2-methylbenzyltriphenylphosphonium chloride**

C26H24ClP MW 402,91

10g..... 50g..... 250g

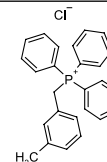


**C6226**

**3-methylbenzyltriphenyl phosphonium chloride**

C26H24ClP MW 402,91

10g..... 50g

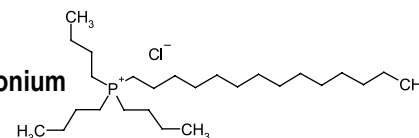


**D9978**

**Tributyl(tetradecyl)phosphonium chloride**

C26H56ClP MW 435,16

25g..... 100g..... 500g

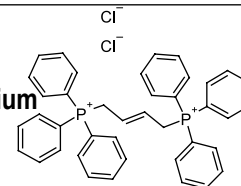


**BJ318**

**Trans-2-butene-1,4-bis(triphenylphosphonium chloride)**

C40H36Cl2P2 MW 649,59

10g..... 50g

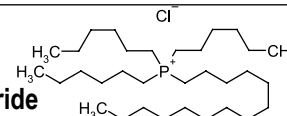


**LE318**

**Trihexyl(tetradecyl)phosphonium chloride**

C32H68ClP MW 519,33

10g..... 50g





# Chemistry - Green Chemistry

## Ionic Liquids : Chlorides - Chromates - Decanoates

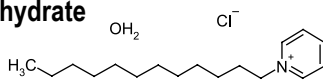
### Chlorides Pyridiniums

**AH396**

**N-dodecylpyridinium chloride monohydrate**

C17H32ClNO MW 301,90

25g..... 100g

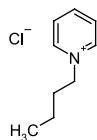


**M0598**

**1-n-butylpyridinium chloride**

C9H14ClN MW 171,67

10g..... 25g

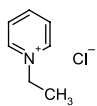


**BK166**

**1-ethylpyridinium chloride**

C7H10ClN MW 143,62

5g

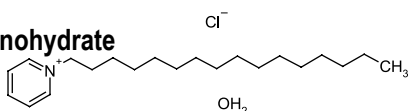


**23099**

**Cetylpyridinium chloride monohydrate**

C21H40ClNO MW 358,01

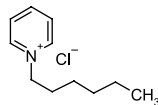
25g..... 100g..... 500g



**BK408**

**1-hexylpyridinium chloride**

C11H18ClN MW 199,73

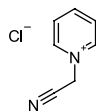


**AH063**

**N-(cyanomethyl)pyridinium chloride**

C7H7ClN2 MW 154,60

10g..... 50g..... 250g

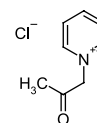


**O5227**

**1-acetylpyridinium chloride**

C8H10ClNO MW 171,63

5g..... 25g..... 100g



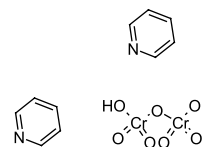
### Chromates Pyridiniums

**08873**

**Pyridinium dichromate**

C10H12Cr2N2O7 MW 376,21

25g..... 100g..... 500g

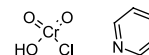


**07390**

**Pyridinium chlorochromate**

C5H6ClCrNO3 MW 215,56

25g..... 100g..... 500g

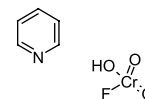


**C8099**

**Pyridinium fluorochromate**

C5H6CrFNO3 MW 199,10

5g..... 25g



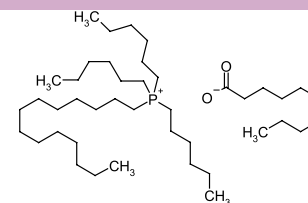
### Decanoates Phosphoniums

**LE291**

**Trihexyl(tetradecyl)phosphonium decanoate**

C42H87O2P MW 655,13

10g..... 50g



# Chemistry - Green Chemistry

## Ionic Liquids : Dicyanamides - Ferrates - Hexafluoroantimonates - Hexafluorophosphates

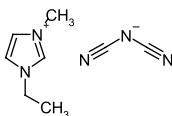
### Dicyanamides Imidazoliums

**CH862**

**1-ethyl-3-methylimidazolium dicyanamide**

C<sub>8</sub>H<sub>11</sub>N<sub>5</sub> MW 177,21

1g..... 5g



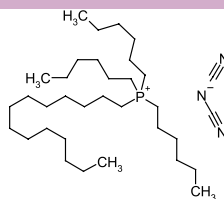
### Dicyanamides Phosponiums

**LE144**

**Trihexyl(tetradecyl)phosphonium dicyanamide**

C<sub>34</sub>H<sub>68</sub>N<sub>3</sub>P MW 549,91

10g..... 50g



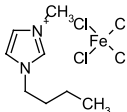
### Ferrates Imidazoliums

**CH868**

**1-butyl-3-methylimidazolium tetrachloroferrate**

C<sub>8</sub>H<sub>15</sub>Cl<sub>4</sub>FeN<sub>2</sub> MW 336,88

5g



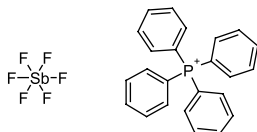
### Hexafluoroantimonates Phosponiums

**U9672**

**Tetraphenylphosphonium hexafluoroantimonate**

C<sub>24</sub>H<sub>20</sub>F<sub>6</sub>PSb MW 575,14

5g..... 25g..... 100g



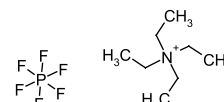
### Hexafluorophosphates Ammoniums

**IP812**

**Tetraethylammonium hexafluorophosphate**

C<sub>8</sub>H<sub>20</sub>F<sub>6</sub>NP MW 275,22

2g..... 10g..... 50g

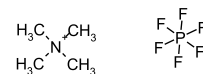


**02946**

**Tetramethylammonium hexafluorophosphate**

C<sub>4</sub>H<sub>12</sub>F<sub>6</sub>NP MW 219,11

25g..... 100g..... 500g

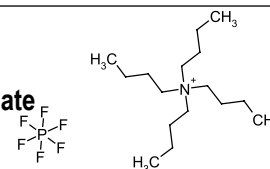


**15347**

**Tetrabutylammonium hexafluorophosphate**

C<sub>16</sub>H<sub>36</sub>F<sub>6</sub>NP MW 387,44

25g..... 100g..... 500g

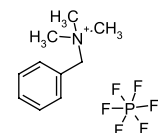


**51350**

**Benzyltrimethylammonium hexafluorophosphate**

C<sub>10</sub>H<sub>16</sub>F<sub>6</sub>NP MW 295,21

25g..... 100g



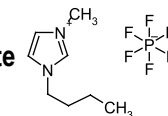
### Hexafluorophosphates Imidazoliums

**BU924**

**1-butyl-3-methylimidazolium hexafluorophosphate**

C<sub>8</sub>H<sub>15</sub>F<sub>6</sub>N<sub>2</sub>P MW 284,19

5g..... 25g

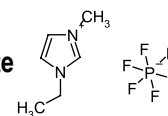


**D9824**

**1-ethyl-3-methylimidazolium hexafluorophosphate**

C<sub>6</sub>H<sub>11</sub>F<sub>6</sub>N<sub>2</sub>P MW 256,13

2g..... 10g..... 50g



# Chemistry - Green Chemistry

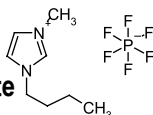
## Ionic Liquids : Hexafluorophosphates - Iodides

**U1802**

**1-n-butyl-3-methylimidazolium hexafluorophosphate**

C8H15F6N2P MW 284,19

5g..... 25g..... 100g

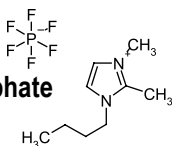


**CH870**

**1-butyl-2,3-dimethylimidazolium hexafluorophosphate**

C9H17F6N2P MW 298,21

5g

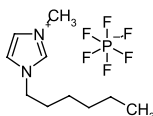


**CH604**

**1-hexyl-3-methylimidazolium hexafluorophosphate**

C10H19F6N2P MW 312,24

5g..... 25g

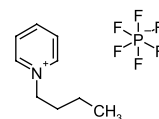


**BJ262**

**1-n-butylpyridinium hexafluorophosphate**

C9H14F6NP MW 281,18

5g..... 25g

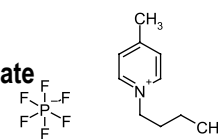


**CH873**

**1-butyl-4-methylpyridinium hexafluorophosphate**

C10H16F6NP MW 295,21

5g..... 25g

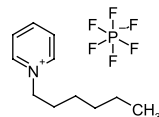


**CH606**

**1-hexylpyridinium hexafluorophosphate**

C11H18F6NP MW 309,24

25g



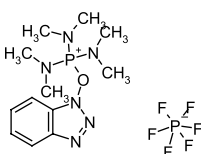
### Hexafluorophosphates Phosphoniums

**10604**

**Benzotriazol-1-yl-oxy-tris(dimethylamino)  
phosphonium hexafluorophosphate**

C12H22F6N6OP2 MW 442,29

1g..... 5g..... 25g

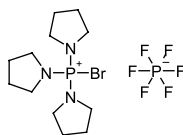


**E7222**

**Bromo-tris-pyrrolidinophosphonium  
hexafluorophosphate**

C12H24BrF6N3P2 MW 466,19

1g..... 5g

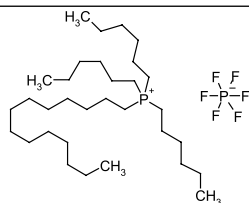


**LE301**

**Trihexyl(tetradecyl)phosphonium  
hexafluorophosphate**

C32H68F6P2 MW 628,84

10g..... 50g



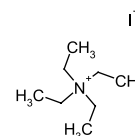
### Iodides Ammoniums

**15321**

**Tetraethylammonium iodide**

C8H20IN MW 257,16

50g..... 250g..... 1kg

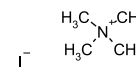


**15419**

**Tetramethylammonium iodide**

C4H12IN MW 201,05

100g..... 500g

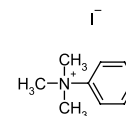


**04942**

**Phenyltrimethylammonium iodide**

C9H14IN MW 263,12

25g..... 100g..... 500g



# Chemistry - Green Chemistry

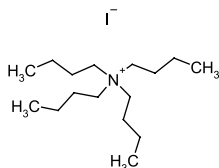
## Ionic Liquids : Iodides

**05005**

**Tetrabutylammonium iodide**

C<sub>16</sub>H<sub>36</sub>IN MW 369,38

50g..... 250g..... 1kg

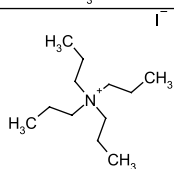


**15457**

**Tetrapropylammonium iodide**

C<sub>12</sub>H<sub>28</sub>IN MW 313,27

25g..... 100g

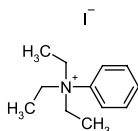


**U9590**

**Phenyltriethylammonium iodide**

C<sub>12</sub>H<sub>20</sub>IN MW 305,20

10g..... 50g

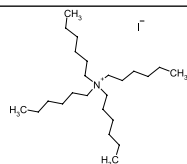


**15388**

**Tetrahexylammonium iodide**

C<sub>24</sub>H<sub>52</sub>IN MW 481,59

5g..... 25g

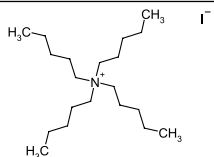


**15450**

**Tetrapentylammonium iodide**

C<sub>20</sub>H<sub>44</sub>IN MW 425,48

5g..... 25g..... 100g

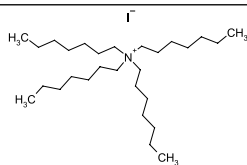


**AH102**

**Tetra-n-heptylammonium iodide**

C<sub>28</sub>H<sub>60</sub>IN MW 537,70

5g..... 25g..... 100g

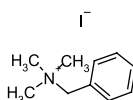


**AZ114**

**Benzyltrimethylammonium iodide**

C<sub>10</sub>H<sub>16</sub>IN MW 277,15

25g..... 100g

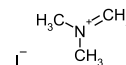


**63567**

**n,n-dimethylmethyleammonium iodide**

C<sub>3</sub>H<sub>8</sub>IN MW 185,01

10g..... 50g..... 250g

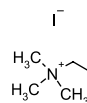


**20156**

**Iodomethyltrimethylammonium iodide**

C<sub>4</sub>H<sub>11</sub>I<sub>2</sub>N MW 326,95

5g..... 25g..... 100g

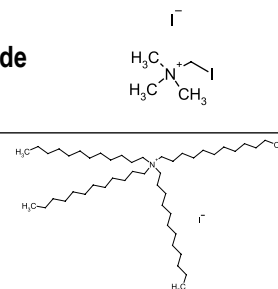


**C9275**

**Tetra-n-dodecylammonium iodide**

C<sub>48</sub>H<sub>100</sub>IN MW 818,24

2g..... 10g

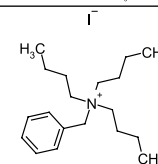


**AH326**

**Benzyl tri-n-butylammonium iodide**

C<sub>19</sub>H<sub>34</sub>IN MW 403,39

25g..... 100g



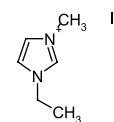
### Iodides Imidazoliums

**BK173**

**1-ethyl-3-methylimidazolium iodide**

C<sub>6</sub>H<sub>11</sub>N<sub>2</sub> MW 238,07

5g

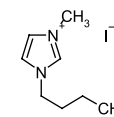


**CH864**

**1-butyl-3-methylimidazolium iodide**

C<sub>8</sub>H<sub>15</sub>N<sub>2</sub> MW 266,13

5g

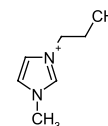


**CH863**

**1-methyl-3-propylimidazolium iodide**

C<sub>7</sub>H<sub>13</sub>N<sub>2</sub> MW 252,10

5g



# Chemistry - Green Chemistry

## Ionic Liquids : Iodides - Nitrates

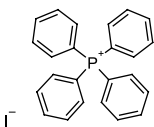
### Iodides Phosphoniums

**30530**

**Methyl(triphenyl)phosphonium iodide**

C24H20IP MW 466,31

25g..... 100g..... 500g

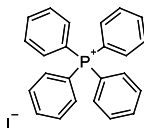


**C7766**

**Tetraphenylphosphonium iodide**

C24H20IP MW 466,31

5g..... 100g

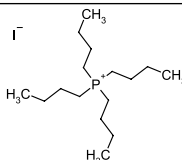


**CI086**

**Tetra-n-butylphosphonium iodide**

C16H36IP MW 386,34

5g..... 25g..... 100g

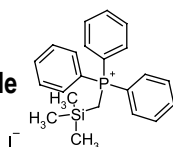


**AZ090**

**(trimethylsilylmethyl)triphenylphosphonium iodide**

C22H26IPSi MW 476,42

1g..... 5g

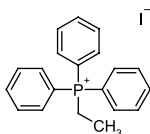


**B3558**

**Ethyltriphenylphosphonium iodide**

C20H20IP MW 418,26

25g..... 100g

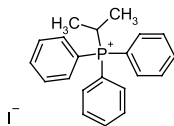


**B3568**

**Isopropyltriphenylphosphonium iodide**

C21H22IP MW 432,29

10g..... 100g..... 250g

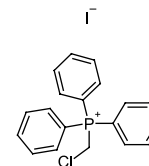


**AZ167**

**(chloromethyl)triphenylphosphonium iodide**

C19H17ClIP MW 438,68

10g..... 50g



### Iodides Pyridiniums

**D2692**

**N-aminopyridinium iodide**

C5H7IN2 MW 222,03

5g..... 25g

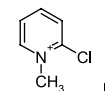


**07994**

**2-chloro-1-methylpyridinium iodide**

C6H7ClIN MW 255,49

25g..... 100g..... 500g

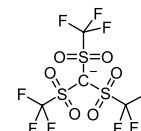
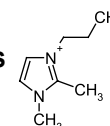


**LE196**

**1,2-dimethyl-3-propylimidazolium tris (trifluoromethylsulfonyl)methide**

C12H15F9N2O6S3 MW 550,44

2g



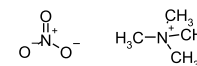
### Nitrates Ammoniums

**IP537**

**Tetramethylammonium nitrate**

C4H12N2O3 MW 136,15

10g..... 50g..... 250g

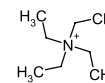


**IP538**

**Tetraethylammonium nitrate, 35% w/w aq. soln.**

C8H20N2O3 MW 192,26

50ml..... 250ml ..... 1L



# Chemistry - Green Chemistry

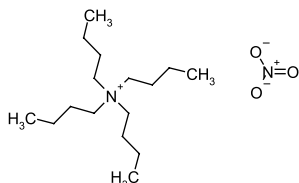
## Ionic Liquids : Nitrates - Phosphates - Sulfates

15350

### Tetrabutylammonium nitrate

C<sub>16</sub>H<sub>36</sub>N<sub>2</sub>O<sub>3</sub> MW 304,48

5g..... 25g..... 100g



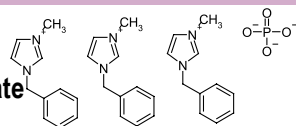
## Phosphates Imidazoliums

CG763

### 1-benzyl-3-methylimidazoliumphosphate

C<sub>33</sub>H<sub>39</sub>N<sub>6</sub>O<sub>4</sub>P MW 614,69

5g

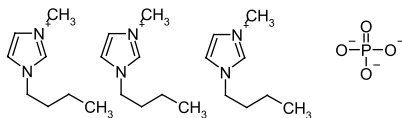


CG771

### 1-butyl-3-methylimidazolium phosphate

C<sub>24</sub>H<sub>45</sub>N<sub>6</sub>O<sub>4</sub>P MW 512,64

5g

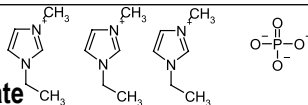


LE387

### 1-ethyl-3-methylimidazolium phosphate

C<sub>18</sub>H<sub>33</sub>N<sub>6</sub>O<sub>4</sub>P MW 428,48

5g

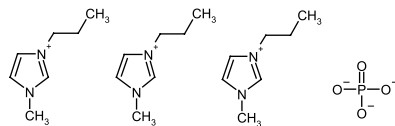


LE246

### 1-methyl-3-propylimidazolium phosphate

C<sub>21</sub>H<sub>39</sub>N<sub>6</sub>O<sub>4</sub>P MW 470,56

5g

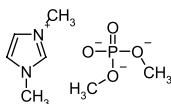


CH857

### 1,3-dimethylimidazolium dimethyl phosphate

C<sub>7</sub>H<sub>15</sub>N<sub>2</sub>O<sub>4</sub>P MW 222,18

5g



## Sulfates

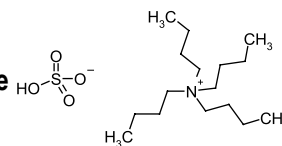
### Alkylammoniums

05760

### Tetrabutylammonium hydrogen sulfate

C<sub>16</sub>H<sub>37</sub>N<sub>2</sub>O<sub>4</sub>S MW 339,54

50g..... 250g..... 1kg

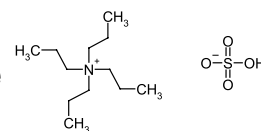


D0050

### Tetrapropylammonium hydrogensulphate

C<sub>12</sub>H<sub>29</sub>N<sub>2</sub>O<sub>4</sub>S MW 283,43

1g..... 5g..... 25g



## Sulfates

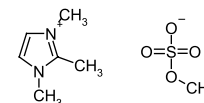
### Imidazoliums

BA237

### 1,2,3-trimethylimidazolium methylsulfate

C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>4</sub>S MW 222,26

5g



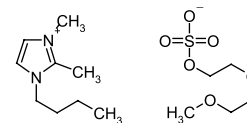
LE332

### 1-butyl-2,3-dimethylimidazolium

### diethyleneglycolmonomethylether sulfate

C<sub>14</sub>H<sub>28</sub>N<sub>2</sub>O<sub>6</sub>S MW 352,45

5g

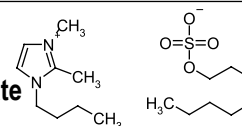


CG766

### 1-butyl-2,3-dimethylimidazolium octylsulfate

C<sub>17</sub>H<sub>34</sub>N<sub>2</sub>O<sub>4</sub>S MW 362,54

5g

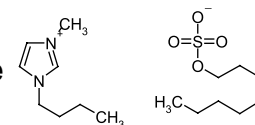


CG770

### 1-butyl-3-methylimidazolium octylsulfate

C<sub>16</sub>H<sub>32</sub>N<sub>2</sub>O<sub>4</sub>S MW 348,51

5g





# Chemistry - Green Chemistry

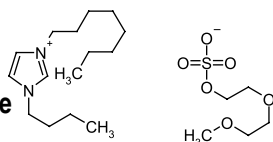
## Ionic Liquids : Sulfates - Sulfonylimides

**LE406**

**1-methyl-3-octylimidazolium  
diethyleneglycolmonomethylether sulfate**

C20H40N2O6S MW 436,62

5g

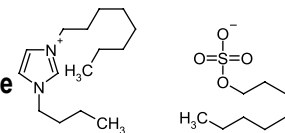


**LE248**

**1-methyl-3-octylimidazolium octylsulfate**

C23H46N2O4S MW 446,70

5g

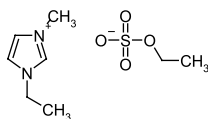


**CH859**

**1-ethyl-3-methylimidazolium ethyl sulfate**

C8H16N2O4S MW 236,29

5g..... 25g

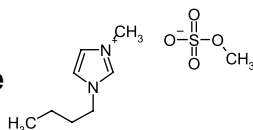


**CG769**

**1-butyl-3-methylimidazolium methylsulfate**

C9H18N2O4S MW 250,32

5g

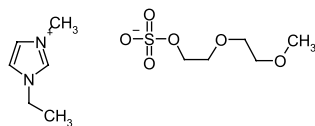


**CH860**

**1-ethyl-3-methylimidazolium  
2(2-methoxyethoxy)ethyl sulfate**

C11H22N2O6S MW 310,37

5g..... 25g



### Sulfates

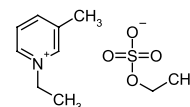
#### Pyridiniums

**CH874**

**1-ethyl-3-methylpyridinium ethyl sulfate**

C10H17NO4S MW 247,32

5g

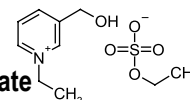


**CH875**

**1-ethyl-3-(hydroxymethyl)pyridinium ethyl sulfate**

C10H17NO5S MW 263,31

5g



### Sulfonylimides

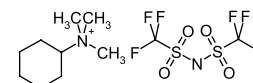
#### Ammoniums

**CH854**

**Cyclohexyltrimethylammonium  
bis(trifluoromethanesulfonyl)imide**

C11H20F6N2O4S2 MW 422,41

5g

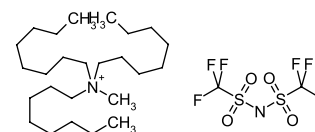


**CH853**

**Methyl-n-octylammonium bis  
(trifluoromethanesulfonyl)imide**

C27H54F6N2O4S2 MW 648,86

5g



# Chemistry - Green Chemistry

## Ionic Liquids : Sulfonylimides

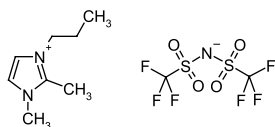
### Sulfonylimides Imidazoliums

**LE244**

**1,2-dimethyl-3-propylimidazolium  
bis(trifluoromethylsulfonyl)imide**

C<sub>10</sub>H<sub>15</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 419,37

5g

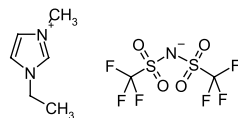


**LE325**

**1-ethyl-3-methylimidazolium  
bis(trifluoromethylsulfonyl)imide**

C<sub>8</sub>H<sub>11</sub>F<sub>6</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 391,31

5g

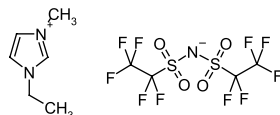


**LE184**

**1-ethyl-3-methylimidazolium  
bis(pentafluoroethylsulfonyl)imide**

C<sub>10</sub>H<sub>11</sub>F<sub>10</sub>N<sub>3</sub>O<sub>4</sub>S<sub>2</sub> MW 491,33

2g



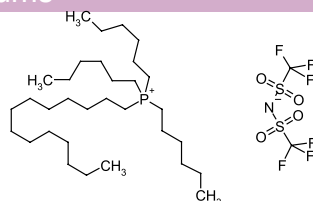
### Sulfonylimides Phosponiums

**LE297**

**Trihexyl(tetradecyl)phosphonium bis  
(trifluoromethanesulfonyl)amide**

C<sub>34</sub>H<sub>68</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>PS<sub>2</sub> MW 764,02

10g..... 50g



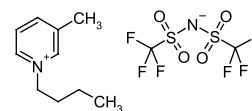
### Sulfonylimides Pyridiniums

**LE209**

**N-butyl-3-methylpyridinium  
bis(trifluoromethylsulfonyl)imide**

C<sub>12</sub>H<sub>16</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 430,39

5g

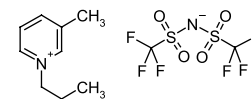


**LE407**

**N-propyl-3-methylpyridinium  
bis(trifluoromethylsulfonyl)imide**

C<sub>11</sub>H<sub>14</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 416,36

5g



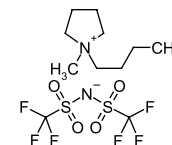
### Sulfonylimides Pyrrolidiniums

**CH871**

**1-butyl-1-methylpyrrolidinium  
bis(trifluoromethanesulfonyl)imide**

C<sub>11</sub>H<sub>20</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub> MW 422,41

5g



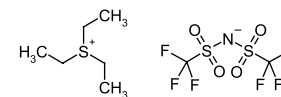
### Sulfonylimides Sulfoniums

**CH855**

**Triethylsulfonium  
bis(trifluoromethanesulfonyl)imide**

C<sub>8</sub>H<sub>15</sub>F<sub>6</sub>N<sub>2</sub>O<sub>4</sub>S<sub>3</sub> MW 399,40

5g



# Chemistry - Green Chemistry

## Ionic Liquids : Tetrafluoroborates - Tosylates

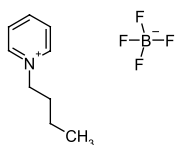
### Tetrafluoroborates Alkylpyridiniums

**CH780**

**1-butylpyridinium tetrafluoroborate**

C9H14BF4N MW 223,02

5g

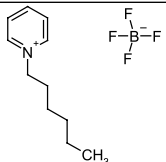


**CH782**

**1-hexylpyridinium-tetrafluoroborate**

C11H18BF4N MW 251,08

5g



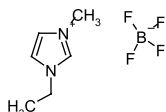
### Tetrafluoroborates Imidazoliums

**D9825**

**1-ethyl-3-methylimidazolium tetrafluoroborate**

C6H11BF4N2 MW 197,97

5g..... 25g

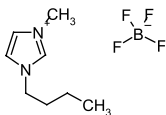


**U1843**

**1-butyl-3-methyl-imidazolium tetrafluoroborate**

C8H15BF4N2 MW 226,03

5g

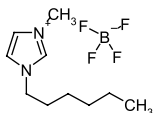


**LE234**

**1-hexyl-3-methylimidazolium tetrafluoroborate**

C10H19BF4N2 MW 254,08

5g..... 25g

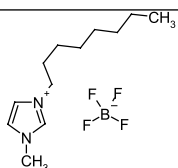


**LE202**

**1-methyl-3-octylimidazolium tetrafluoroborate**

C12H23BF4N2 MW 282,14

5g

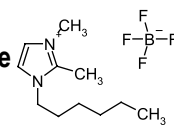


**BP059**

**1-hexyl-2,3-dimethylimidazolium tetrafluoroborate**

C11H21BF4N2 MW 268,11

5g

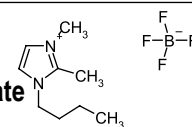


**CG767**

**1-butyl-2,3-dimethylimidazolium tetrafluoroborate**

C9H17BF4N2 MW 240,05

5g..... 25g



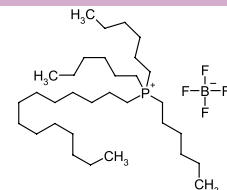
### Tetrafluoroborates Phosphoniums

**LE298**

**Trihexyl(tetradecyl)phosphonium tetrafluoroborate**

C32H68BF4P MW 570,68

10g



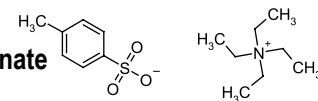
### Tosylates Ammoniums

**04750**

**Tetraethylammonium p-toluenesulfonate**

C15H27NO3S MW 301,45

25g..... 100g..... 500g



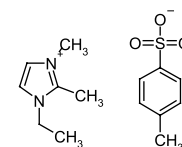
### Tosylates Imidazoliums

**LE257**

**1-ethyl-2,3-dimethylimidazolium tosylate**

C14H20N2O3S MW 296,39

5g



# Chemistry - Green Chemistry

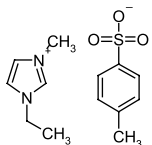
## Ionic Liquids : Tosylates - Trifluoromethanesulfonates

**BQ254**

**1-ethyl-3-methylimidazolium tosylate**

C<sub>13</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>S MW 282,36

5g

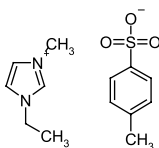


**CH858**

**1-ethyl-3-methylimidazolium p-toluenesulfonate**

C<sub>13</sub>H<sub>18</sub>N<sub>2</sub>O<sub>3</sub>S MW 282,36

5g



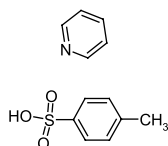
### Tosylates Pyridiniums

**26372**

**Pyridinium toluene-4-sulfonate**

C<sub>12</sub>H<sub>13</sub>NO<sub>3</sub>S MW 251,31

25g

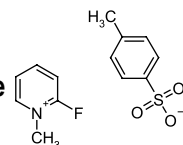


**12615**

**2-fluoro-N-methylpyridinium toluene-4-sulfonate**

C<sub>13</sub>H<sub>14</sub>FNO<sub>3</sub>S MW 283,32

1g..... 5g



### Trifluoromethanesulfonates Ammoniums

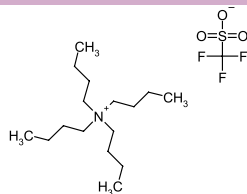
**15355**

**Tetrabutylammonium**

**trifluoromethanesulfonate**

C<sub>17</sub>H<sub>36</sub>F<sub>3</sub>NO<sub>3</sub>S MW 391,54

5g..... 25g..... 100g



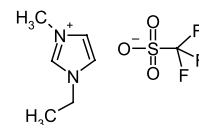
### Trifluoromethanesulfonates Imidazoliums

**96594**

**1-ethyl-3-methylimidazolium  
trifluoromethanesulfonate**

C<sub>7</sub>H<sub>11</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 260,237

2g..... 5g..... 10g



**BJ343**

**1-butyl-3-methylimidazolium  
trifluoromethanesulfonate**

C<sub>9</sub>H<sub>15</sub>F<sub>3</sub>N<sub>2</sub>O<sub>3</sub>S MW 288,291

2g..... 5g..... 10g

