

# Local Anesthetics

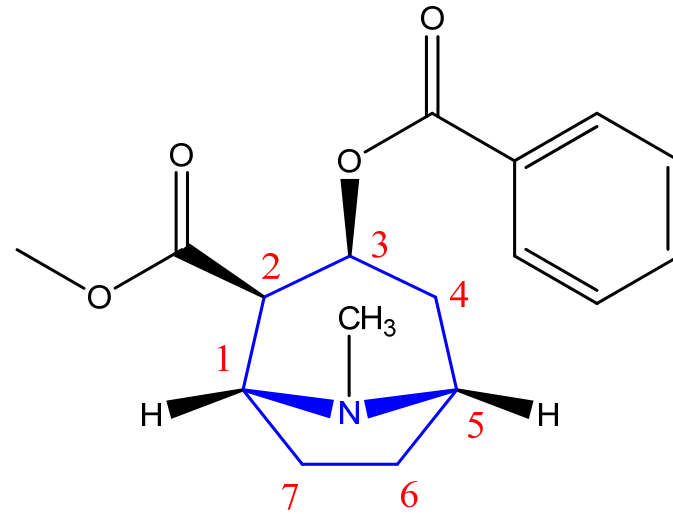
Dr. Gopal Krishna Padhy  
Assoc. Professor  
Centurion University of Technology and  
Management

## Definition

Local anaesthetics are drugs which block both sensory and motor nerve conduction to produce a temporary loss of sensation without loss of consciousness. They are used to abolish pain sensation in a restricted area of the body.

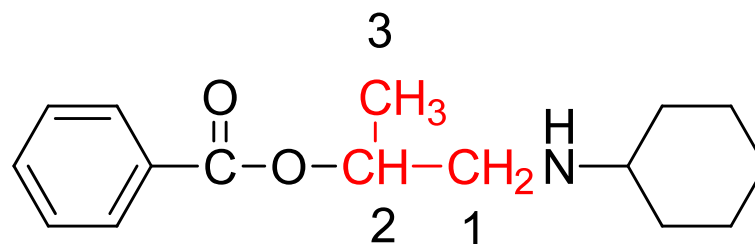
# Classification

Benzoic acid derivatives



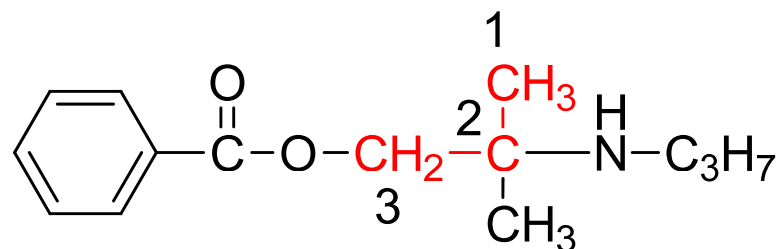
**Cocaine**

2-methyl-3 $\beta$ -hydroxy-1 $\alpha$ H,5 $\alpha$ H-tropane-2 $\beta$ -carboxylate  
benzoate



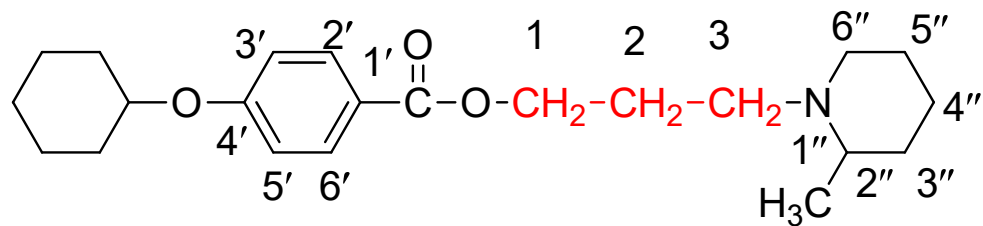
**Hexylcaine**

IUPAC: 1-(cyclohexylamino)propan-2-yl benzoate



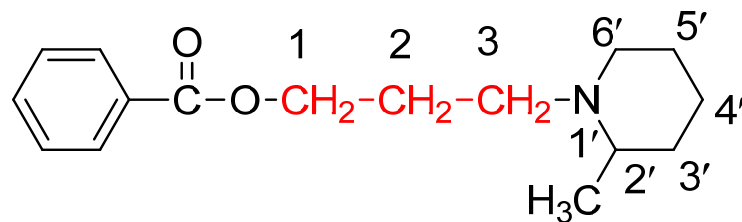
**Meprylcaine**

IUPAC: [2-methyl-2-(propylamino)propyl] benzoate



## Cyclomethycaine

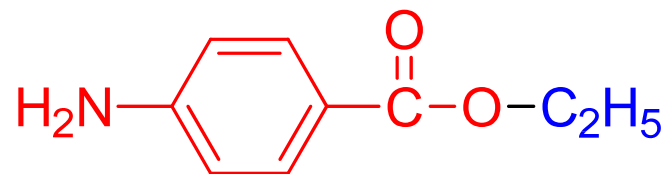
IUPAC: 3-(2''-methylpiperidin-1''-yl)propyl 4'-cyclohexyloxybenzoate



## Piperocaine

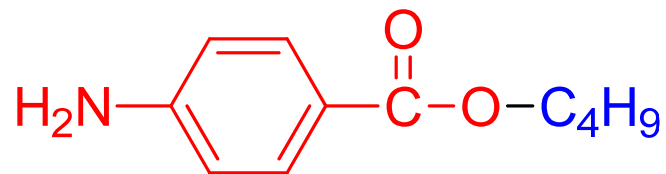
IUPAC: 3-(2'-methylpiperidin-1'-yl)propyl benzoate

## P-aminobenzoic acid derivatives



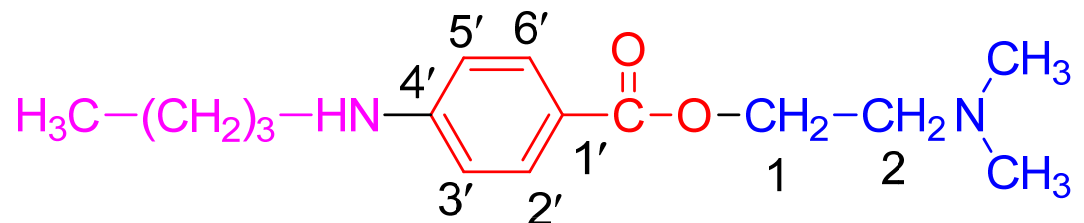
**Benzocaine**

IUPAC: Ethyl p-aminobenzoate



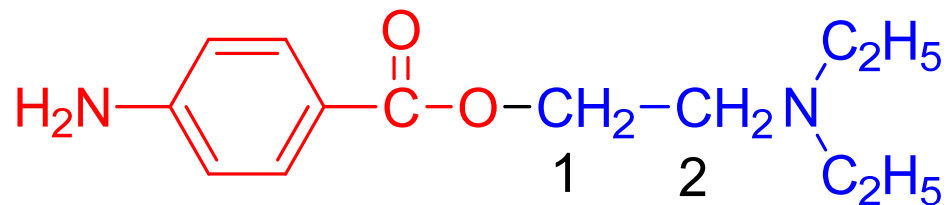
**Butamben**

IUPAC: Butyl 4-aminobenzoate



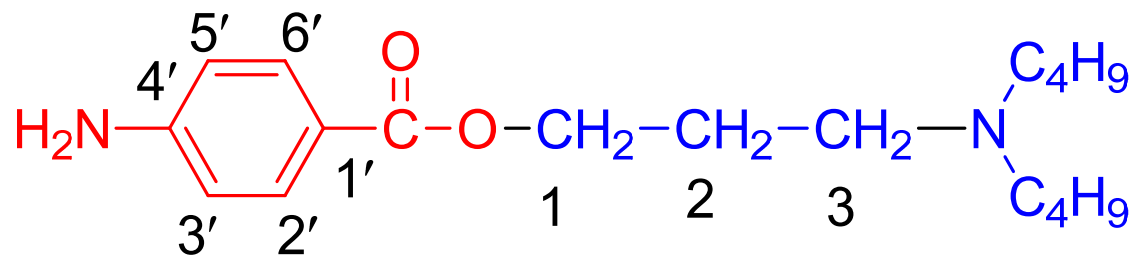
**Tetracaine**

2-(dimethylamino)ethyl 4'-(butylamino)benzoate



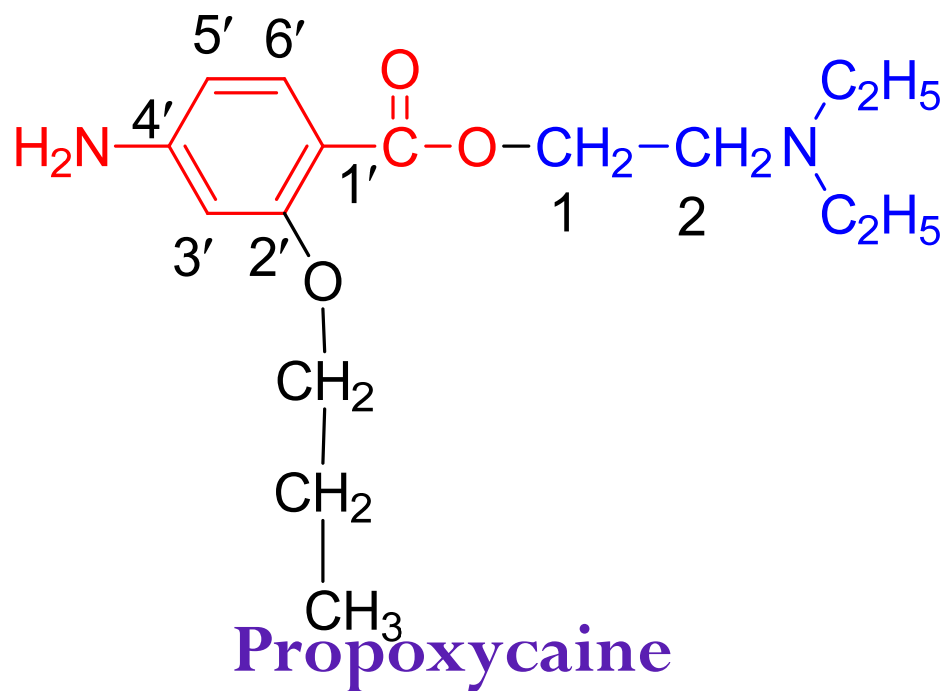
**Procaine**

IUPAC: 2-Diethylaminoethyl p-aminobenzoate



## Butacaine

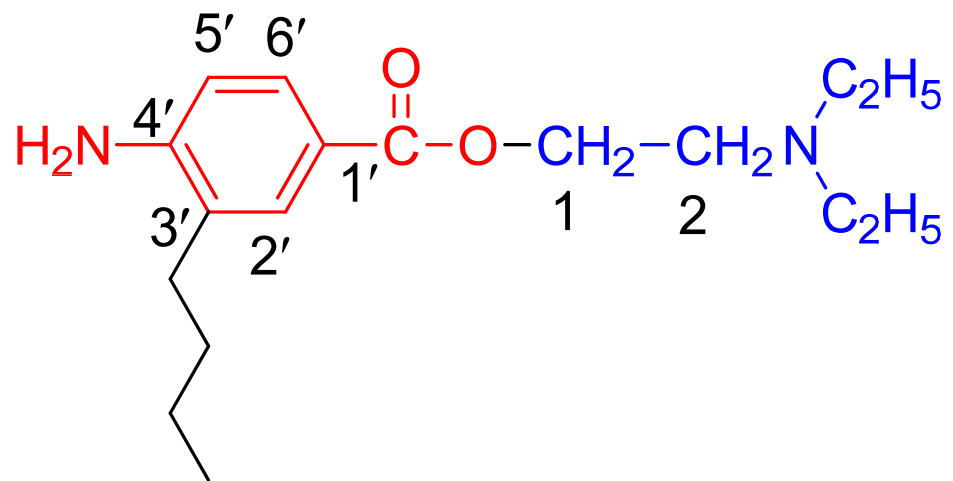
IUPAC: 3-(dibutylamino)propyl 4'-aminobenzoate



## Propoxycaine

IUPAC: 2-(diethylamino)ethyl 4'-amino-2'-propoxybenzoate

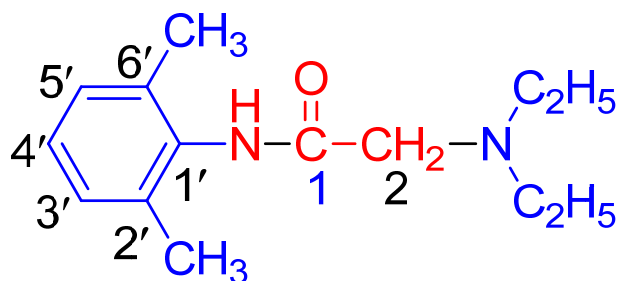




**Benoxinate**

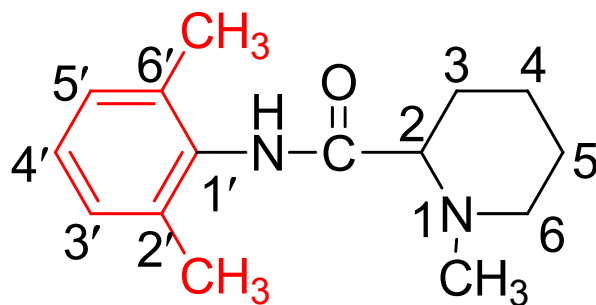
IUPAC: 2-(diethylamino)ethyl 4'-amino-3'-butoxybenzoate

## Anilide derivatives



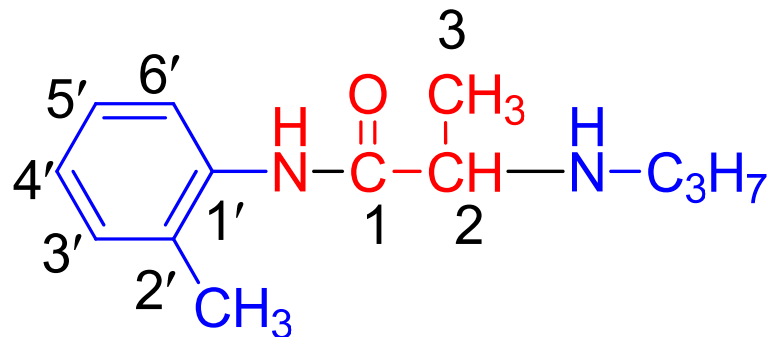
**Lidocaine (lignocaine)**

IUPAC: 2-(diethylamino)-*N*-(2',6'-dimethylphenyl)acetamide



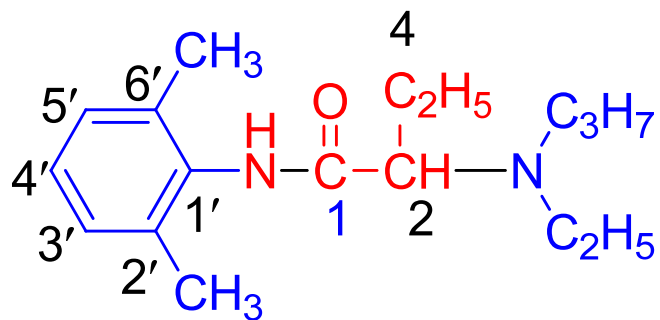
**Mepivaine**

IUPAC: *N*-(2',6'-dimethylphenyl)-1-methylpiperidine-2-carboxamide



### Prilocaine

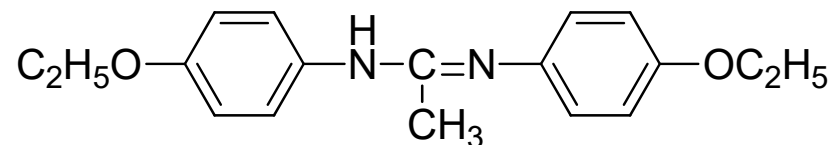
IUPAC: *N*-(2'-methylphenyl)-2-(propylamino)propanamide



### Etidocaine

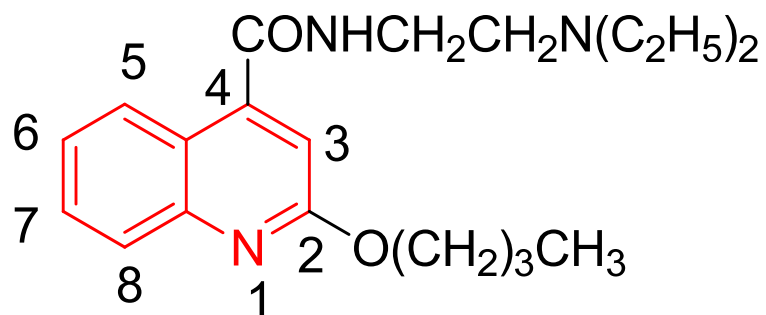
IUPAC: *N*-(2',6'-dimethylphenyl)-2-[ethyl(propyl)amino]butanamide

## Miscellaneous compounds



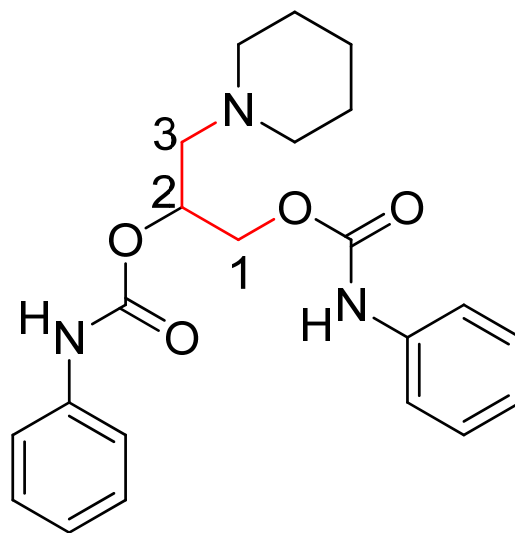
### Phenacaine

IUPAC: *N,N'*-bis(4-ethoxyphenyl)ethanimidamide



### Dibucaine

IUPAC: 2-butoxy-*N*-[2-(diethylamino)ethyl]quinoline-4-carboxamide



## Dipiperodon

IUPAC: [2-(phenylcarbamoyloxy)-3-piperidin-1-ylpropyl] N-phenylcarbamate