



Impurity  
Standards

Peptide  
Impurities

Stable  
Isotope  
Labelled  
Standards

## **CHEMTOPES**

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**LABELLED STANDARDS**

Abiraterone Acetate-D3	Diazoxide - D3	Methimazole- D3	Resiquimod -D5
Acenocoumarol-D5	Digoxin - D3	Methotrexate - D3	Ritonavir - D6
Acotiamide - D6	Diltiazem - D4	Metoclopramide - D3	Ribociclib-D8
Afatinib - D6	Dipyridamole D20	Metoprolol - D6	Rivastigmine - D6
Agomelatine D3 & D6	Dihydroergotamine D3	Metopimazine - D6	Relugolix D6
Albendazole D3	Domperidone - D6	Midodrine - D6	Ruxolitinib - D9
Alcaftadine-D3	Doxazosin - D8	Milnacipran - D10	Sacubitril - D4
Alfuzosin - D6	Duloxetine - D3	Minoxidil - D10	Salmeterol - D3
Alvimopan - D5	Edoxaban-D6	Monomethyl fumarate - D5	Sapropterin-D3
Ambrisentan - D3	Elagolix - D6	Nadolol-D9	Sarpogrelate-D3, D4 & D6
Apremilast - D3	Eliglustat - D15	Nebivolol - D4	Scopolamine D3
Aprepitant - D3	Eluxadoline - D3	Nintedanib - D3	Selexipag - D6
Atazanavir - D6	Enzalutamide - D3 & D6	Nitroso Derivatives-D3&D10	Sildenafil - D3 & D8
Avobenzon - D3	Erlotinib - D6	Nirmatrelvir D9	Sildenafil - D4
Axitinib - D3	Escitalopram oxalate - D3	Octocrylene - D10	Sofosbuvir - D6
Baclofen - D4	Esomeprazole-D3	Olanzapine - D3	Sumatriptan - D6
Binimetinib-D3	Ethacizine - D5	Omeprazole - D3	Tadalafil - D3
Biopterin - D3	Fedratinib-D9	Ondansetron D3	Tamsulosin - D4
Bosentan - D4	Fingolimod - D4	Oseltamivir - D3 & D5	Tasimelteon - D5
Brexpiprazole - D8	Fluphenazine-D6	Osimertinib - D6	Tamatinib-D9
Brequinar - D3	Flurbiprofen - D3	Oxaceprol-D3	Tenofovir Alafenamide- D5
Bupropion - D6 & D9	Gefitinib - D3	Palbociclib - D8	Tetrabenazine D3 & D6
Buspiron - D8	Glasdegib- D4	Paroxetine - D4	Tetrabenazine Desmethyl-D3
Candesartan - D5	Gliclazide - D4	Pazopanib - D3	Tepotinib-13CD3
Carbimazole - D3 & D5	Granisetron D3	Perospirone - D8	Tiagabine - D5
Carvedilol - D4	Hydroxychloroquine - D5	Phenytoin - D10	Timolol - D9 Maleate
Cibenzoline - D4	Ibrutinib - D5	Phytonadione - D7	Trandolapril - D5
Cilostazol - D11	Ibuprofen - D3	Pitolisant D10	Ulipristal acetate - D3
Citalopram Hydrobromide-D3	Imatinib - D3	Piperidine - D4	Ubrogepant D5
Clomiphene Z-isomer-D10	Ivosidenib-D4	Pirfenidone - D3	Valsartan - D9
Clomiphene E-Isomer-D10	Ketoprofen - D3	Pitofenone - D4	Velpatasvir - D3
Cyclizine D3	Lacosamide - D3 & D6	Podophyllotoxin - D3	Venlafaxine - D4
Cyclosporine - D4	Lasmiditan-D3	Prazosin - D8	Verapamil - D6
Cyproterone Acetate - D3	Ledipasvir - D6	Procyclidine-D5	Vericiguat - D3
Dabigatran - D4	Levothyroxine - D3	Propiomazine - D6	Vortioxetine - D8
Daclatasvir - D6	Losartan impurity 21-D4	Promethazine - D6	Viloxazine D5
Dapagliflozin - D5	Macitentan - D4	Propafenone - D5	Warfarin - D5
Darolutamide - D4	Mebeverine acid D5	Propranolol - D7	Zileuton-D4
Dasatinib - D4	Manidipine - D4	Quetiapine - D4	(R) & (S)-Tranlycypromine-D5
Deferasirox - D4	Mephesisin - D3	Raloxifene - D4	® & (S)-Oxybutynine D10
Desglymidodrine-D6	Metaxalone D6	Ranolazine - D3 & D8	

**API IMPURITY STANDARDS**

Abacavir	Cefepime	Eltrombopag	Lenalidomide	Oxybutynin	Tamatinib
Abiraterone	Cefixime	Empagliflozin	Lenvatinib	Palbociclib	Tamoxifen
Acalabrutinib	Cefoxitin	Emtricitabine	Lercanidipine	Palonosetron	Tamsulosin
Acenocoumarol	Cefuroxime	Enalapril	Letermovir	Paroxetine	Tegoprazan
Acylovir	Cefprozil	Enrofloxacin	Levetiracetam	Pazopanib	Temozolomide
Adefovir	Celecoxib	Enzalutamide	Levonorgestrel	Pemetrexed	Teneligliptin
Adenosine	Ceritinib	Epinephrine	Levosimendan	Penciclovir	Tenofovir
Adrenaline	Chlorpromazine	Eplerenone	Levothyroxine	Perindopril	Tepotinib
Afatinib	Cholecalciferol	Ergocalciferol	Lifitegrast	Phytonadione	Teriparatide
Agomelatine	Ciprofloxacin	Erlotinib	Linagliptin	Pilocarpine	Teriflunomide
Alafosfalin	Cilastatin	Escitalopram	Lincomycin	Piperacillin	Testosterone
Albendazole	cis-Crotonic acid	Ethacizine	Linezolid	Pirfenidone	Tetrabenazine
Alcaftadine	Cisatracurium	Ethinyl Estradiol	Lisinopril	Posaconazole	Theophylline
Alfuzosin	Citalopram	Etomidate	Loperamide	Pramipexole	Thiothixene
Almotriptan	Clascoterone	Etonogestrel	Lopinavir	Prasugrel	Tiagabine
Alvimopan	Clarithromycin	Favipiravir	Losartan	Proparacaine	Ticagrelor
Ambrisentan	Clindamycin	Felodipine	Loteprednol	Prucalopride	Tigecycline
Amiodarone	Clobetasol	Fenoterol	Lovastatin	Prazosin	Tiotropium
Amphotericin	Clomiphene	Fesoterodine	Lumefantrine	Prednisolone	Tofacitinib
Anastrozole	Crisaborole	Fingolimod	Lurasidone	Pregabalin	Tolvaptan
Androstendione	Cromolyn	Fluconazole	Macitentan	Promethazine	Topiramate
Apremilast	Cytidine	Flumazenil	Manidipine	Propafenone	Tranylecypromine
Atazanavir	Cyclophosphamide	Flumethasone	Marbofloxacin	Propofol	Trazodone
Azacitidine	Dabigatran	Fluocinolone	Mebendazole	Pyridostigmine	Trehalose
Azelastine	Daclatasvir	Fluphenazine	Mebeverine	Quetiapine	Trimetazidine
Azelnidipine	Dantrolene	Flurbiprofen	Medetomidine	Rabeprazole	Trihexyphenidyl
Azilsartan	Darolutamide	Formoterol	Medroxyprogesterone	Raloxifene	Ulipristal
Aztreonam	Darunavir	Foscarnet	Melphalan	Raltegravir	Umeclidinium
Apixaban	Dasatinib	Fosfomycin	Mepivacaine	Ramipril	Valbenazine
Arformoterol	Desogestrel	Frovatriptan	Methazolamide	Ranolazine	Valacyclovir
Arginine	Deferasirox	Furosemide	Methotrexate	s Rasagiline	Valganciclovir
Baclofen	Dehydroprogesterone	Fulvestrant	Mesalamine	Regadenoson	Valproate
Baricitinib	Demeclocycline	Fluvoxamine	Minocycline	Relugolix	Valsartan
Beclomethasone	Dexamethasone	Ganciclovir	Minoxidil	Remdesivir	Venlafaxine
Bendamustine	Dexarazoxane	Gefitinib	Mirabegron	Ribociclib	Verapamil
Benfotiamine	Dexlansoprazole	Gemicitabine	Molnupiravir	Rilpivirine	Vericiguat
Bepotastine	Dexmedetomidine	Gemifloxacin	Mosapride	Riociguat	Vilanterol
Betamethasone	Dextrosimendan	Gimeracil	Nebivolol	Risperidone	Vildagliptin
Bictegravir	Dezocine	Glimepiride	Neratinib	Ritonavir	Viloxazine
Bilastine	Diazoxide	Glycopyrronium	Nelarabine	Rivaroxaban	Voriconazole
Binimetinib	Dibutyric acid	Hydrocortisone	Netarsudil	Rivastigmine	Vortioxetine
Bis Hydroxy Piperazine	Difluprednate	Hydroxychloroquine	Nicardipine	Rotigotine	Zanubrutinib
Bisoprolol	Dihydro Ergotamine	Ibrutinib	Niflumic Acid	Roxithromycin	Zileuton
Bis piperidine	Diltiazem	Ibuprofen	Nilotinib	Ruxolitinib	Ziprasidone
Bortezomib	Dimetindene	Indacaterol	Nintedanib	Sacubitril	
Bosentan	Dimethomorph	Indometacin	Niratinib	Safinamide	
Bosutinib	Dolutegravir	Iohexol	Nirmatrelvir	Salbutamol	
Brexipiprazole	Domperidone	Iopamidol	Nitroso Derivatives	Salmeterol	
Brimonidine	Dorzolamide	Isavuconazole	Norethisterone	Scopolamine	
Brivaracetam	Doxazosin	Isosulfan	Norethindrone	Selexipag	
Bupropion	Doxepin	Isotretinoin	Olanzapine	Sildenafil	
Cabozantinib	Doxorubicin	Istradefylline	Olaparib	Silodosin	
Cabotegravir	Doxycycline	Ivabradine	Olmesartan	Siponimod	
Carbidopa	Doxercalciferol	Ivacaftor	Olopatadine	Sitagliptin	
Carmustine	Droxidopa	Ivosidenib	Omepazole	Sofusuvir	
Carvedilol	Duloxetine	Ixosomib	Ondansetron	Sorafenib	
Cefadroxil	Edoxaban	Labetalaol	Ormeloxifene	Sotorasib	
Ceftazidime	Efinaconazole	Lacosamide	Orphenadrine	Sparfloxacin	
Cefazolin	Elagolix	Lamivudine	Osetamivir	Sumatriptan	
Cefalotin	Eletriptan	Lanreotide	Osimertinib	Sunitinib	
Cefdinir	Eliglustat	Laudanosine	Oxcarbazepine	Tapentadol	



## PEPTIDE IMPURITIES

### Calcitonin

Asp-26-Calcitonin  
 Glu-14-Calcitonin  
 Glu-20-Calcitonin  
 Asp (3)-Calcitonin  
 Des(32,31)Thr,  
 Pro-Calcitonin  
 Calcitonin  
 ParallelDimer  
 Calcitoninylglycine  
 Ser(Ac)5-Calcitonin  
 Des-(32,31)Thr-Pro CalcitoninAcid  
 31-Dehydro-Thr-Calcitonin  
 Truncated(32-27)-Calcitonin  
 Trisulfide-Calcitonin  
 1-2 HydrolysisCalcitonin  
 Calcitonin Salmon D10Impurity  
 1,7bis(3-sulfo-L-Ala)-  
 Calcitoninsalmon  
 1,7bis(3-sulfo-L-Ala)-  
 Calcitoninylglycine  
 Truncated(32-20)-Calcitonin  
 Truncated(32-29)-Calcitonin

### Cetrorelix

Cetrorelix D10  
 Des-Amido-Cetrorelix  
 L-Ala(10)-Cetrorelix  
 Des-Acetyl-Cetrorelix  
 Des-D-Ala-Cetrorelix  
 Endo-3-D-Pal-Cetrorelix

### Linaclotide

Asp(7)-Linaclotide  
 Ac-Linaclotide  
 Des-Tyr(14)-Linaclotide  
 Cys(1)-IMD-Linaclotide

### Daptomycin

Daptomycinβ-Isomer  
 Anhydro-Daptomycin  
 Daptomycin(RS-1)  
 DaptomycinLactone  
 Hydrolysis  
 Daptomycinimpurity-1  
 DaptomycinImpurity-B1/II  
 DaptomycinImpurity-B2

### Damptomycin

Damptomycin impurity-5  
 Daptomycin Impurity-6  
 Daptomycin Impurity-7  
 Daptomycin Impurity-8  
 Daptomycin Impurity-3  
 Daptomycin Impurity-4  
 Isodecyl acyl isomer

### Lanreotide

Lanreotide D8 TFA salt  
 Des-Thr(8)-Lanreotide  
 N-Ac-Lanreotide  
 L-Nal-Lanreotide  
 Lanreotide Acid

### Icatibant

Des-D-Arg(1)-Icatibant (1-6)-Icatibant  
 Des-L-Arg(2)-Icatibant (7-10)-Icatibant  
 L-Arg(1)-Icatibant Ac-Icatibant

### Octreotide

D-Thr(6)-Octreotide Lys(Ac)-Octreotide  
 D-Cys(2)-Octreotide Des-Threoninol-  
 Ac-Octreotide Octreotide  
 Trp(4)-Octreotide D-Cys(7)-Octreotide  
 Threoninol(Ac)  
 8-Octreotide

### Leuprolide

D-Trp-Leuprolide  
 Leuprolide-Impurity-6  
 Leuprolide-Impurity-8  
 D-Ser-Leuprolide  
 D-His-Leuprolide  
 Leuprolide-Metabolite(pentapeptide)  
 (O-Acetyl-L-Ser)-Leuprolide  
 L-Leu (6)-Leuprolide  
 D-Leu-Leuprolide  
 Ac(2-9) Leuprolide  
 D-Tyr-Leuprolide  
 Leuprolide D10 (labelled)  
 Ser(Ac)-Leuprolide  
 Leuprolide impurity(1-5)  
 Leuprolide impurity(1-8)  
 Des-Ser(4)-Leuprolide

### Octreotide D8

Linear octreotide LPhe(  
 1)-Octreotide  
 Des-D-Phe(1)-Octreotide  
 Des-D-Trp(4)-Octreotide  
 Des-Lys(5)-Octreotide  
 Octreotide Acid  
 D-Phe(3)-Octreotide Dallo-  
 Thr(6)-Octreotide  
 (N-O) acyl isomer of Octreotide  
 Trisulfide Octreotide

### Teriparatide

Under Development  
 Met(O) 8-Teriparatide  
 Met(O) 18-Teriparatide  
 Met(O) 8,18 -Teriparatide  
 Met(O) 8, Ser(tBu) 1 -Teriparatide  
 Met(O) 18, Ser(tBu) 1-Teriparatide

### Miscellaneous

Des-Asn(1)-Plecanatide  
 N,N'-dimethyl-Gly-Desmopressin

### Oxytocin

Ac-Oxytocin D-Asn 5-Oxytocin  
 Asp 5-Oxytocin Ala (3-CN) 5-Oxytocin  
 Glu 4-Oxytocin Parallel Dimer-Oxytocin  
 Leu 3-Oxytocin Antiparallel Dimer Oxytocin  
 Oxytocic Acid

### Semaglutide

Semaglutide WRS  
 Semaglutide D5  
 Des-Glu(3)-Semaglutide  
 Endo-Gly(4)-Semaglutide

### Vasopressin

Gly-OH-AVP/Gly 9-Vasopressin  
 Glu4-AVP  
 Asp5-AVP  
 Di-sulfonic acid-AVP  
 Des-Gly-Vasopressin  
 Endo-Gly-Vasopressin  
 Ac-Vasopressin  
 Vasopressin D5 (labelled)  
 Trisulfide AVP  
 D-Asn-Vasopressin  
 Des-Pro-Vasopressin  
 Gln(Acm)-Vasopressin  
 His(2)-Vasopressin  
 D-Tyr-Vasopressin  
 D-Arg(8)-Vasopressin  
 D-Cys(1)-Vasopressin  
 D-Cys(6)-Vasopressin  
 D-Pro(7)-Vasopressin  
 Des-Gly-OH-Vasopressin  
 D-Phe(3)-Vasopressin  
 Parallel Dimer  
 Antiparallel Dimer  
 β-Asp(5)-Vasopressin  
 Ac-Asp(5)-Vasopressin  
 Leu(7)-Vasopressin  
 Glu(4)-Gly-OH-Vasopressin

**Note: Liraglutide and  
 Semaglutide Impurities  
 under development**