

TDM – Therapeutic drugs monitoring proficiency scheme

Therapeutic drug monitoring (TDM) is a measurement of specific drug concentration levels at timed intervals in patients, usually through blood/serum samples, and is necessary where control of drug concentrations is required to achieve optimum treatment for the patient. For most drugs, monitoring is not required as they have a wide therapeutic index. However, drugs with narrow therapeutic

range may result in a high or low serum concentration if not monitored and controlled.

ISO 15189 requires that medical laboratories seek confirmation for confidence in their results through participation in suitable proficiency testing programmes (PT) or external quality assurance (EQA). Accreditation bodies consider participation in PT/EQA an important tool for demonstrating the technical competence of the laboratory.



Scheme operation

The main TDM scheme year operates from January to December and test materials are despatched three rounds at a time four times per annum. Round despatch dates and reporting deadlines are available on the current TDM application form, and further information can be found in the TDM scheme description. These documents can be downloaded from our website www.lgcstandards.com

Test material	Analytes
Lyophilised human serum	Therapeutic drugs mixture Caffeine, Carbamazepine, Carbamazepine+CBZ-epoxide, CBZ-epoxide, Clonazepam, Digoxin, Ethosuximide, Lamotrigine, Lithium, Methotrexate, Phenobarbitone, Phenytoin, Primidone, TD- Amikacin, TD-Gentamicin, TD-Tobramycin, TD-Vancomycin, Theophylline, Valproate
Lyophilised human serum	Anti-epileptic (AE1) Gabapentin, Levetiracetam, OH-oxcarbazepine, Pregabalin, Tiagabine
Lyophilised human serum	Anti-epileptic (AE2) Felbamate, Lacosamide, Rufinamide, Topiramate, Vigabatrin, Zonisamide
Lyophilised human serum	*Anti-epileptic (AE3) Retigabine (Ezogabine)
Lyophilised human serum	*Anti-epileptic (AE4) Perampanel
Lyophilised human serum	Cardiac drugs mixture Amiodarone, Desethylamiodarone, Flecainide
Lyophilised human serum	Drugs for the treatment of substance related disorders Buprenorphine, EDDP, Methadone, Norbuprenorphine
Lyophilised new born calf serum & human serum	Psychoactive drugs Amitriptyline/Nortriptyline, Clomipramine/Norclomipramine, Clozapine/Norclozapine, Imipramine/Desipramine, Amisulpride, Aripiprazole/Dehydroaripiprazole, Citalopram/Norcitalopram, Dothiepin/Northiaden, Doxepin/Nordoxepin, Fluoxetine/Norfluoxetine, Duloxetine, Escitalopram, Fluphenazine, Fluvoxamine, Haloperidol, Maprotiline/Normaprotiline, Mirtazapine/Normirtazapine, Olanzapine, Paroxetine, Perphenazine, Quetiapine/Norquetiapine, Risperidone/HO-risperidone, Sertraline/Norsertaline, Sulpiride, Thioridazine, Trazodone, Trimipramine/Nortrimipramine, Venlafaxine/Norvenlafaxine, Ziprasidone, Zuclopenthixol
Lyophilised human urine	*Smoking related drugs Cotinine, Nicotine
Human serum	**Antibiotic drugs Amikacin, Chloramphenicol, Flucytosine, Gentamicin, Netilmicin, Teicoplanin, Tobramycin, Vancomycin

*Not included in our scope of accreditation.

**These analytes are produced in collaboration with the Bristol based UKNEQAS antibiotics drugs scheme and distributed monthly.

For further Information contact LGC Standards:



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