Public Health England (PHE) has responsibility for operating the National Collection of Type Cultures (NCTC) and for developing the UK Standards for Microbiological Investigations (SMIs). NCTC was established in 1920 and holds more than 5000 historical and new strains of bacteria that have been implicated in human infection. The strains consist of type and reference cultures, many of which are used as control strains.

The UK SMIs include a series of Test Procedures (TPs) that are used in clinical testing laboratories throughout the UK and also further afield. PHE develops the TPs to help ensure equivalence of investigation strategies for microbial infections across the UK. The TPs describe commonly undertaken tests and include recommended control strains. The use of controls provides essential information about the validity of the test results.

It is important that laboratories use control strains from recognised sources, such as NCTC, to ensure that the strains are fully characterised and authentic this also helps standardise the quality of testing across the country. Laboratories frequently prepare in house reference stocks of the control strains for daily use. Those reference stocks must be managed carefully to ensure the strains are not sub-cultured (passaged) too frequently because this may lead to genetic variation and/or contamination.

PHE provides NCTC strains and Test Procedures to support the quality assurance programmes that are essential in clinical microbiology testing laboratories to deliver the best diagnostic outcomes for patients. The guide below shows the reactions to be expected with NCTC cultures for some of the more commonly used UK SMI test procedures.

For further information or to download any of the Standards for Microbiological Investigations go to: www.hpa.org.uk/ProductsServices/InfectiousDiseases/UKStandardsForMicrobiologyInvestigations/

**REFERENCES**

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Please visit the Culture Collections Website: http://www.phe-culturecollections.org.uk/ for more information.