

# ACCURUN® 1 SERIES 4000

## Multi-Marker Positive Control



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10004GB-19 September 2021

## Explanation of symbols used in LGC Clinical Diagnostics product labeling



Upper limit of temperature



Temperature limitation



Authorized Representative in  
the European Community



Biological risks



Use By



*In Vitro* Diagnostic Medical Device



Negative control



Catalogue number



Consult instructions for use



Positive control



Batch code



Manufacturer



Control



Highly Flammable



Toxic by inhalation, in contact  
with skin and if swallowed



Health Hazard

# ACCURUN® 1 SERIES 4000 Multi-Marker Positive Control

## NAME AND INTENDED USE

ACCURUN 1 controls are intended to estimate laboratory testing precision and can be used to detect errors in laboratory testing procedures. ACCURUN® 1 Multi-Marker Positive Controls have been formulated for use with *in vitro* diagnostic test kits for the detection of antibodies to Human Immunodeficiency Virus Types 1 and 2 (HIV 1 and 2), antibodies to Human T-Lymphotropic Virus Types I and II (HTLV I and II), antibodies to Hepatitis B Core Antigen (HBcAg), antibodies to Hepatitis C Virus (HCV), antibodies to Cytomegalovirus (CMV), and Hepatitis B Surface Antigen (HBsAg). A negative control for these analytes is available separately from LGC Clinical Diagnostics.

## SUMMARY

Frequent testing of independent quality control samples provides the analyst with a means of monitoring the performance of laboratory assays. Routine use of controls enables laboratories to monitor day-to-day test variation, lot-to-lot performance of test kits, and operator variation, and can assist in identifying increases in random or systematic error. A well designed quality control program can provide added confidence in the reliability of results obtained for unknown specimens. The use of low-reactive samples as independent controls may provide valuable information concerning laboratory proficiency and kit lot variation that may affect assay sensitivity<sup>1</sup>.

## PRINCIPLES OF THE PROCEDURE

ACCURUN 1 controls have been designed for use with *in vitro* assay procedures for purposes of monitoring test performance. ACCURUN 1 Positive Controls are manufactured from human serum or plasma, including materials reactive for HBsAg and antibodies to HIV 1 and 2, HTLV I and II, HBcAg, HCV and CMV. ACCURUN 1 controls do not have assigned values. This positive control has been formulated to produce positive reactivity in those manufacturers' assays listed in Table 1. Specific levels of reactivity will vary among different manufacturers' assays, different procedures, different lot numbers, and different laboratories.

## REAGENTS

Item No. 2000-0008 3 vials, 5 ml per vial

This positive control contains stabilizers (EDTA, buffering agents) and 0.1% ProClin® (5-chloro-2-methyl-4-isothiazolin-3-one & 2-methyl-4-isothiazolin-3-one) as preservative. Materials categorized as potentially infectious have been treated with beta-propiolactone and ultraviolet irradiation.

## WARNINGS AND PRECAUTIONS

### For In Vitro Diagnostic Use

CAUTION: Handle ACCURUN 1 controls and all human blood products as though capable of transmitting infectious agents. ACCURUN 1 Positive Controls are manufactured from human serum or plasma, including materials reactive for HBsAg and antibodies to HIV 1 and 2, HTLV I and II, HBcAg, HCV and CMV with current FDA required tests.

### Safety Precautions

Use the Centers for Disease Control (CDC) recommended universal precautions for handling ACCURUN 1 controls and human blood<sup>2</sup>. Do not pipette by mouth; do not eat or drink in areas where specimens are being handled. Clean any spillage by immediately wiping up with 0.5% sodium hypochlorite solution. Dispose of all specimens, controls and materials used in testing as though they contain infectious agents.

### Handling Precautions

Do not use ACCURUN 1 controls beyond the expiration date. Avoid microbial contamination of the controls when opening and closing the vials.

## STORAGE INSTRUCTIONS

Store ACCURUN 1 controls refrigerated at 2-8°C. Once opened, ACCURUN 1 controls should be discarded after 60 days. Multiple freeze-thaw cycles are not recommended, and may have variable adverse effects upon test results. To prevent leakage, store vials upright.

## INDICATIONS OF REAGENT INSTABILITY OR DETERIORATION

Alterations in physical appearance may indicate instability or deterioration of ACCURUN 1 controls. Solutions that are visibly turbid should be discarded.

## PROCEDURE

### Materials Provided

ACCURUN 1 Positive Controls are manufactured from human serum or plasma, including materials reactive for HBsAg and antibodies to HIV 1 and 2, HTLV I and II, HBcAg, HCV and CMV. See REAGENTS for a list of package sizes. A negative control for these analytes is also available separately from LGC Clinical Diagnostics.

### Materials Required but not Provided

Refer to instructions supplied by manufacturers of the test kits to be used.

## Instructions for Use

Mix the contents of the vials by gently swirling. Allow the controls to reach room temperature prior to use, then return controls to refrigerated storage immediately after use. ACCURUN 1 controls should be included in a test run using exactly the same procedure provided by the manufacturer for unknown specimens. ACCURUN 1 controls must NOT be substituted for the positive and negative control reagents provided with licensed test kits.

## Quality Control

Since ACCURUN 1 controls do not have assigned values, it is recommended that each laboratory validate the use of each lot of ACCURUN 1 control with each specific assay system prior to its routine use in the laboratory.

## INTERPRETATION OF RESULTS

Levels of reactivity of ACCURUN 1 Positive Controls may vary with different manufacturers' tests and different test kit lots. Different series of ACCURUN 1 controls are formulated to yield different reactivity levels for anti-HIV 1, anti-HIV 2, and other analytes. Each laboratory must establish its own range of acceptable values for ACCURUN 1 controls with the particular test kits being used. When results for ACCURUN 1 controls are outside the established acceptable range of values, it may be an indication of unsatisfactory test performance. Possible sources of discrepancy are: deterioration of test kit reagents, operator error, faulty performance of equipment, or contamination of reagents.

## LIMITATIONS OF THE PROCEDURE

ACCURUN 1 CONTROLS MUST NOT BE SUBSTITUTED FOR THE POSITIVE AND NEGATIVE CONTROL REAGENTS PROVIDED WITH MANUFACTURED TEST KITS.

TEST PROCEDURES and INTERPRETATION OF RESULTS provided by manufacturers of test kits must be followed closely. Deviations from procedures recommended by test kit manufacturers may produce unreliable results. ACCURUN 1 controls are provided for quality assurance purposes and must not be used for calibration or as a primary reference preparation in any test procedure. Adverse shipping and/or storage conditions or use of outdated controls may produce erroneous results.

## EXPECTED RESULTS

ACCURUN 1 CONTROLS DO NOT HAVE ASSIGNED VALUES. This positive control has been formulated to produce positive reactivity in those manufacturers' assays listed in Table 1. Specific levels of reactivity will vary among different manufacturers' assays, different procedures, different reagent lot numbers, and different laboratories. Each laboratory should establish its own range of acceptable values for each analyte. For example, the acceptable range might include all values within 2 standard deviations of the mean of 20 data points obtained in 20 runs over a period of 30 days<sup>3</sup>.

## SPECIFIC PERFORMANCE CHARACTERISTICS

ACCURUN 1 controls have been designed for use with *in vitro* assay procedures for purposes of monitoring assay performance. ACCURUN 1 Positive Controls are manufactured from human serum or plasma including materials reactive for HBsAg and antibodies to HIV 1 and 2, HTLV I and II, HBcAg, HCV and CMV. ACCURUN 1 controls do not have assigned values. This positive control has been formulated to produce positive reactivity in those manufacturers' assays listed in Table 1. Specific levels of reactivity will vary among different manufacturers' assays, different procedures, different reagent lot numbers, and different laboratories. Procedures for implementing a quality assurance program and monitoring test performance on a routine basis must be established by each individual laboratory.

## REFERENCES

- Green IV GA, Carey RN, Westgard JO, Carten T, Shablesky LA, Achord D, Page E, and Le AV. Quality control for qualitative assays: quantitative QC procedure designed to assure analytical quality required for an ELISA for hepatitis B surface antigen. Clin. Chem. 43:9 1618-1621, 1997.
- Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings.
- Statistical Quality Control for Quantitative Measurements: Principles and Definitions; Approved Guideline—Second Edition. NCCLS document C24-A2, 1999.

Table 1. ACCURUN 1 Series 4000 has been formulated to produce positive reactivity in the following manufacturers' assays.

Marker	Manufacturer/Product Name
HIV 1/2	bioMérieux VIDAS HIV DUO Ultra
HTLV I/II	Avioq® HTLV-I/II Micro Elisa System
HCV	Ortho HCV 3.0 Test System with Enhanced SA VE
HBsAg	Abbott ARCHITECT HBsAg Qualitative
HBc	Ortho HBc EIA
CMV	Trinity Biotech Captia™ CMV IgG

For assistance, contact LGC Clinical Diagnostics Technical Support at + 1.508.244.6400.