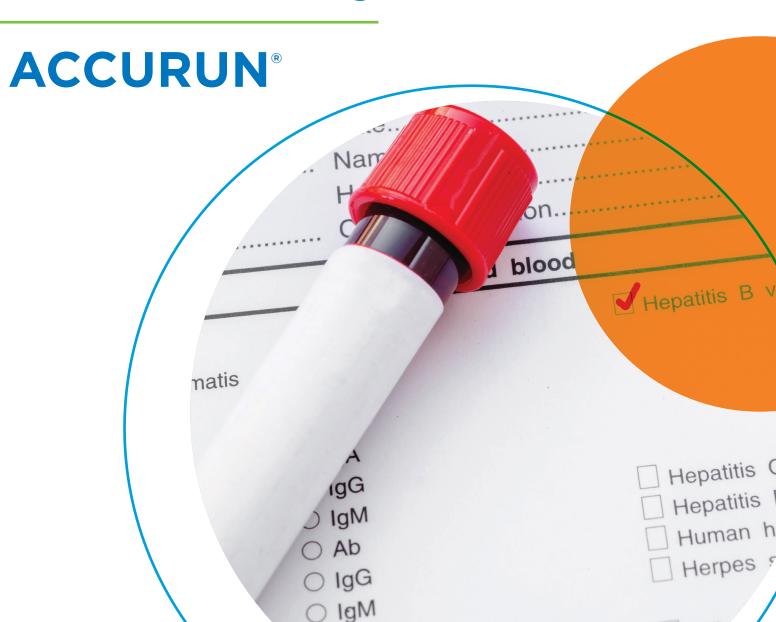


The Leader in Low-Positive Controls

for Infectious Disease Testing



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Gold Standard Quality Control

Controls and reference materials for infectious disease testing are the cornerstone of SeraCare's QC business. SeraCare has provided gold standard third party run controls and reference materials to clinical laboratories for more than 30 years. This decades-long experience in the manufacture and design of third party controls ensures you're receiving best-in-class products to support clinical lab QC programs, every time.

THE VALUE OF INDEPENDENT CONTROLS

Independent quality controls offer a cost-effective insurance policy against critical testing failures and a costly cycle of troubleshooting, downtime, test repeats, and send outs. Regulatory agencies consider them an essential part of any clinical lab quality control program.

The laboratory shall design quality control procedures that verify the attainment of the intended quality of results.

ISO 15189:2012 5.6.2.1 - Medical Laboratories - Requirements for quality and competence





THE BENEFITS OF ACCURUN

- Increase confidence by rigorously challenging your assays
- Mitigate the risk of reporting false results
- Catch declining assay performance in advance of catastrophic failures
- Reduce repeat testing due to errors
- Enhance your assay troubleshooting capabilities
- Improve the monitoring and management of your QC processes

FOUR REASONS NOT TO RELY ON INSTRUMENT MANUFACTURERS' CONTROLS ALONE.

- **1.** Manufacturer controls are often formulated from the same raw materials as the assay calibrators, and thus mimic the calibrators' performance.
- 2. Manufacturer controls are typically high-positive controls, which will not challenge the assay at lower detection limits where the medical decision point lies.
- **3.** Manufacturer in-kit control lot changes tend to be frequent, making long-term monitoring of the assay difficult
- **4.** In general, manufacturers' controls are optimized for use with the manufacturer's test system, and thus are less likely to identify assay performance issues.

THE LEADER IN THIRD PARTY LOW-POSITIVE CONTROLS FOR INFECTIOUS DISEASE

The truest test of an assay's performance is at the lower limits of detection, near the clinical decision point - the boundary between a positive and negative result. This is where even a modest degradation in performance can produce the catastrophic consequence of a false patient result. Unfortunately, many manufacturers' in-kit controls and third party commercial controls are not designed to detect subtle performance changes at these lower detection limits.

SeraCare's ACCURUN controls are specially formulated to exhibit weak reactivity in true patient-like matrices to pressure test assay performance near critical clinical decision points. ACCURUN independent controls offer sensitive detection of subtle shifts in testing trends and mitigate the risk of reporting false results.

QUALITY AND RELIABILITY

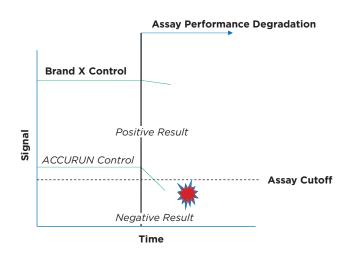
Confidence in your assay results starts with quality controls you can trust. Our facilities are ISO 13485-certified and follow cGMP regulations. This means our products are traceable from sourcing through to delivery — ensuring consistent, high quality QC materials that you can depend on for sensitive daily monitoring of assay performance, providing confidence that reported results are accurate.

Use of independent third party control materials should be considered, either instead of, or in addition to, any control materials supplied by the reagent or instrument manufacturer.

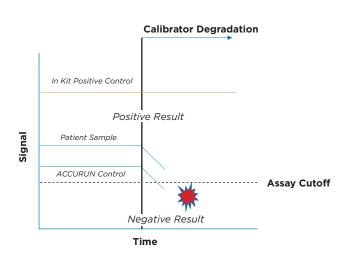
ISO 15189:2012 Section 5.6.2.2 / Medical Laboratories - Requirements for quality and competence

ACCURUN CONTROLS CHECK ALL THE BOXES:

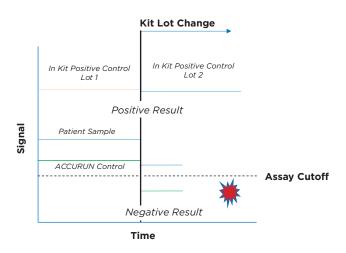
- CLINICALLY RELEVANT RANGES: Specifically designed to be weakly reactive, low-positive controls, ACCURUN truly challenges an assay's performance at critical decision points.
- PATIENT-LIKE MATRICES: ACCURUN controls are formulated to mimic authentic patient samples, as encountered in a daily testing environment.
- **FULL PROCESS:** Whole virus/organism controls are designed to detect failures at every stage of the testing protocol from sample prep to detection.
- LOT TO LOT CONSISTENCY: SeraCare produces large lot sizes under cGMP and ISO 13485 conditions. This ensures availability of bulk quantities of a single lot for long-term QC monitoring.
- **EXTENDED SHELF LIFE:** ACCURUN controls are stable for at least two years from date of manufacture.
- ▼ OPEN VIAL STABILITY: Once opened, ACCURUN serology controls are stable for at least 60 days.
- **EASE OF USE:** Controls are offered in ready-to-use liquid format, enabling streamlined lab workflows.



Scenario 1: Over time, an assay's performance begins to degrade, resulting in reduced sensitivity to the target analyte. Brand X control was designed with a high analyte concentration; despite the performance degradation, control values do not shift significantly and continue to deliver strong positive results. In contrast, the ACCURUN control – formulated near the clinical cutoff value in a patient-like matrix – exhibits a rapid shift in reported results, drifting toward negative values. This provides advanced warning to the lab that there's a problem with the assay.



Scenario 2: The calibrator provided in an IVD assay kit has begun to degrade, but this change is not detected by the in kit positive control, as it was formulated with similar raw materials and designed to work specifically with the manufacturer's assay system; thus, the in kit control mimics calibrator trends. In contrast, the ACCURUN control immediately identifies the shift in assay performance, alerting lab personnel of a problematic trend that needs to be corrected before patient results are impacted.



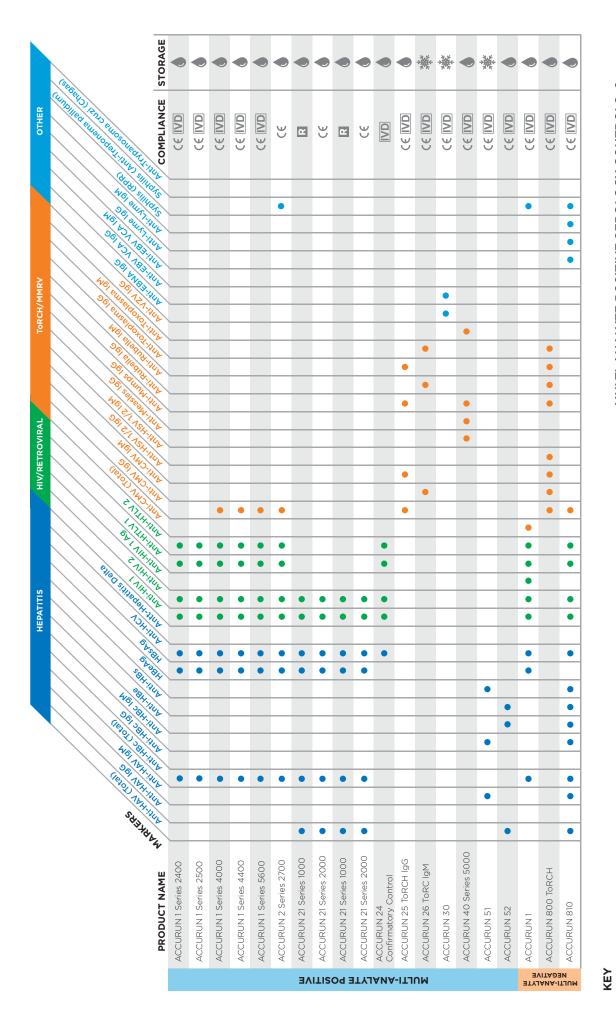
Scenario 3: A clinical lab has switched to a new lot of a manufacturer's assay kit. The new kit lot exhibits reduced sensitivity, but this change is not detected by the in kit positive control, as it was used to determine the cutoff value for the new lot. Because the ACCURUN control was independently manufactured and utilized for long term QC monitoring over many assay kit lots, it picks up the significant shift in sensitivity. Without the use of the independent ACCURUN control, patient results may have been compromised.



ACCURUN SEROLOGICAL CONTROLS

Avoid false positives and false negatives with ACCURUN serological controls in your assay. Our controls help monitor and troubleshoot test methods to isolate system errors in your laboratory. As a leader in lower limit of detection controls, we provide the tools to challenge your assay closer to the assay cutoff, giving confidence in your serology test results.

CONTROL SEROLOGICAL

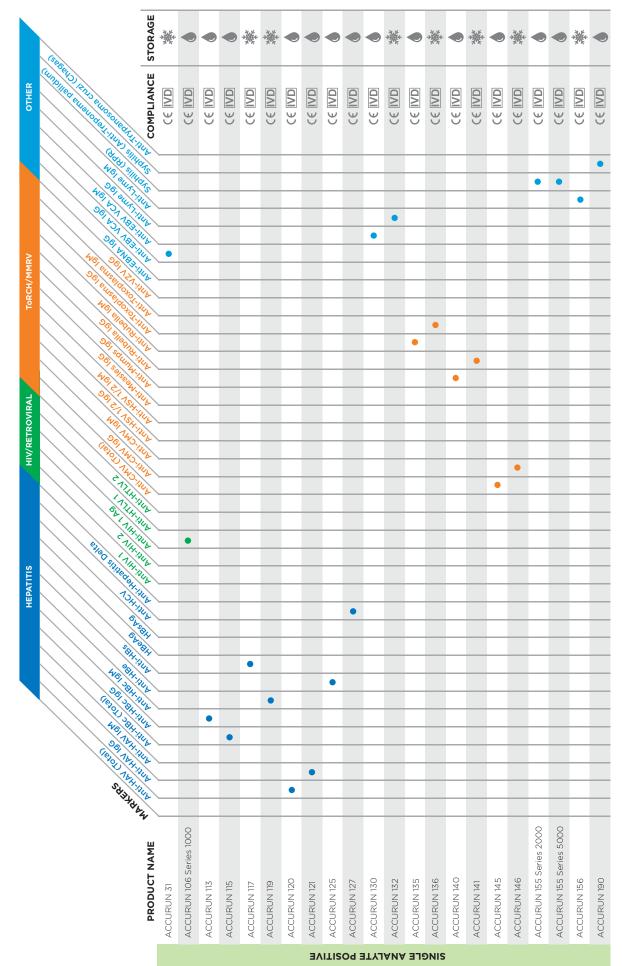


Research Use Œ œ

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CONTROLS: MULTI-ANALYTE POSITIVE SEROLOGY 12 for detailed ordering information.

page **NEGATIVE SEROLOGY CONTROLS:** See page 13 for detailed ordering information.



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SINGLE ANALYTE POSITIVE SEROLOGY CONTROLS: See pages 12 - 13 for detailed ordering information.



Monitor all aspects of your molecular test with a full-process independent control that truly challenges assay performance. ACCURUN molecular controls mimic patient samples and enable monitoring of the entire testing process, from extraction through detection. As a leader in low-positive controls, we provide the tools to challenge your molecular assay near the limit of detection, enabling superior detection of assay variability.

ACCURUN MOLECULAR CONTROLS

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	PRODUCT NAME	A.	NB)		YIN'		HD.	187	c.)/(7/2/	COMPLIANCE	STORAGE
	ACCURUN 305 Series 100										CEIVD	WY
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	ACCURUN 305 Series 300		•								CE IVD	गुर
	ACCURUN 305 Series 400		•								CE IVD	गुर
	ACCURUN 306 Series 500		•								R	WY .
	ACCURUN 315 Series 150			•							CE IVD	WY
STC	ACCURUN 315 Series 200			•							CE IVD	ΨY
A T R	ACCURUN 315 Series 400			•							C€ IVD	गुर
Ö	ACCURUN 315 Series 500			•							C€ IVD	VT.
POSITIVE MOLECULAR CONTROLS	ACCURUN 325 Series 200	•									C€ IVD	濼
ECU	ACCURUN 325 Series 700	•									C€ IVD	業
MOL	ACCURUN 342 Series 100				•						C€ IVD	
N N	ACCURUN 342 Series 700				•						C€ IVD	
SIT	ACCURUN 345 Series 150	•	•	•							C€ IVD	VIT
8	ACCURUN 372 Series 400					•					C€ IVD	
	ACCURUN 372 Series 600					•					C€ IVD	
	ACCURUN 378 Series 5000					•					C€ IVD	
	ACCURUN 381					•	•				C€ IVD	
	ACCURUN 501							•			C€ IVD	濼
υÖ	ACCURUN 611									•	R	濼
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GENETIC REFERENCE	ACCURUN 676								•		R	濼
	ACCURUN 803	•	•	•							C€ IVD	***
TIVE ROLS	ACCURUN 841				•						C€ IVD	
NEGATIVE CONTROLS	ACCURUN 872					•	•				C€ IVD	
20	ACCURUN 873					•	•				C€ IVD	•

KEY

CE

Complies with Conformité Européene

For In Vitro Diagnostic Use

R For Research Use Only



POSITIVE MOLECULAR CONTROLS: See page 13-14 for detailed ordering information.

NEGATIVE MOLECULAR CONTROLS: See page 14 for detailed ordering information.

GENETIC REFERENCE MATERIALS: See page 14 for detailed ordering information.

ACCURUN Multi-Analyte Positive Serology Controls

Material #	Product Name	Markers	# Vials x Fill Size	Compliance
2000-0001	ACCURUN 1 Series 2400	Anti-HIV-1, Anti-HIV-2, Anti-HCV,		
2000-0002	ACCURUN 1 Series 2500	Anti-HBc, Anti-HTLV-I, Anti-HTLV-II, HBsAg	12 x 3.5 mL	IVD, CE, HC
2000-0008	ACCURUN 1 Series 4000		3 x 5.0 mL	IVD, CE
2000-0010	ACCURUN 1 Series 4400	Anti-HIV-1, Anti-HIV-2, Anti-HCV, Anti-HBc, Anti-HTLV-I, Anti-HTLV-II, HBsAg, Anti-CMV	12 x 3.5 mL	
2000-0018	ACCURUN 1 Series 5600	nbsag, and-chiv	6 x 3.5 mL	IVD, CE, HC
2000-0023	ACCURUN 2 Series 2700	Anti-HIV-1, Anti-HIV-2, Anti-HCV, Anti-HBc, Anti-HTLV-I, Anti-HTLV-II, HBsAg, Anti-CMV, Anti-Treponema pallidum	6 x 3.5 mL	CE
2000-0027	ACCURUN 21 Series 1000	Anti-HIV-1, Anti-HIV-2, Anti-HCV, Anti-HBc, HBsAg, Anti-HAV	6 x 3.5 mL	RUO
2000-0028	ACCURUN 21 Series 1000	Anti-HIV-1, Anti-HIV-2, Anti-HCV, Anti-HBc, HBsAg, Anti-HAV	6 x 3.5 mL	CE, HC
2000-0030	ACCURUN 21 Series 2000	Anti-HIV-1, Anti-HIV-2, Anti-HCV, Anti-HBc, HBsAg, Anti-HAV	6 x 3.5 mL	RUO
2000-0031	ACCURUN 21 Series 2000	Anti-HIV-1, Anti-HIV-2, Anti-HCV, Anti-HBc, HBsAg, Anti-HAV	6 x 3.5 mL	CE, HC
2000-0032	ACCURUN 24 Confirmatory Control	Anti-HIV-1, Anti-HIV-2, Anti-HCV, Anti-HTLV-I, Anti-HTLV-II	3 x 1.0 mL	IVD, HC
2000-0034	ACCURUN 25 ToRCH IgG	Anti-Toxoplasma IgG, Anti-Rubella IgG, Anti-CMV IgG, Anti-HSV IgG	3 x 1.0 mL	IVD, CE, HC
2000-0035	ACCURUN 26 ToRC IgM	Anti-Toxoplasma IgM, Anti-Rubella IgM, Anti-CMV IgM	3 x 1.0 mL	IVD, CE, HC
2000-0037	ACCURUN 30	EBV VCA IgG, EBNA IgG	3 x 1.0 mL	IVD, CE, HC
2000-0039	ACCURUN 40 Series 5000	Anti-Measles, Anti-Mumps, Anti-Rubella, Anti-VZV	3 x 1.0 mL	IVD, CE, HC
2000-0040	4.000151111.51		1 x 5.0 mL	IVD, CE, HC
2000-0041	ACCURUN 51	HBeAg, HBc IgM, HAV IgM	6 x 3.5 mL	
2000-0043	ACCURUN 52	Anti-HBe, Anti-HBs, Anti-HAV	6 x 3.5 mL	IVD, CE, HC

ACCURUN Single-Analyte Positive Serology Controls

Material #	Product Name	Markers	# Vials x Fill Size	Compliance
2000-0038	ACCURUN 31	EBV VCA IgM	3 x 1.0 mL	IVD, CE, HC
2015-0065	ACCURUN 106, Series 1000	HIV-1 Ag	3 x 5.0 mL	IVD CE HC
2015-0066	ACCOROIN 100, Series 1000	TIIV-TAg	12 x 3.5 mL	IVD, CE, HC
2015-0068	ACCURUN 113	HBc IgM	1 x 5.0 mL	IVD, CE, HC
2015-0070	ACCURUN 115	HBc IgG	1 x 5.0 mL	IVD, CE, HC
2015-0071	ACCURUN 117	HBeAg	1 x 5.0 mL	IVD, CE
2015-0072	ACCURUN 119	Anti-HBe	1 x 5.0 mL	IVD, CE
2015-0073	ACCURUN 120	HAV IgG	1 x 5.0 mL	IVD, CE, HC
2015-0074	ACCURUN 121	HAV IgM	1 x 5.0 mL	2/D CF 1/C
2015-0076	ACCURUN IZI	HAV Ig™	6 x 3.5 mL	IVD, CE, HC
2015-0077	ACCURUN 125	Anti-HBs	1 x 5.0 mL	>/C CF
2015-0078	ACCURUN 125	Allu-nds	6 x 3.5 mL	IVD, CE, HC
2015-0079	ACCURUN 127	Anti-Hepatitis Delta	1 x 1.0 mL	IVD, CE
2015-0080	ACCURUN 130	Lyme IgG	1 x 1.0 mL	IVD, CE, HC
2015-0081	ACCURUN 132	Lyme IgM	1 x 1.0 mL	IVD, CE, HC



ACCURUN Single-Analyte Positive Serology Controls (continued)

Material #	Product Name	Markers	# Vials x Fill Size	Compliance
2015-0082	ACCURUN 135	Anti-Toxoplasma IgG	1 x 1.0 mL	IVD, CE, HC
2015-0083	ACCURUN 136	Anti-Toxoplasma IgM	1 x 1.0 mL	IVD, CE, HC
2015-0084	ACCURUN 140	Rubella IgG	1 x 5.0 mL	IVD, CE, HC
2015-0086	ACCURUN 141	Rubella IgM	1 x 1.0 mL	IVD, CE, HC
2015-0087	ACCURUN 145	CMV IgG	1 x 1.0 mL	IVD, CE, HC
2015-0088	ACCURUN 146	CMV IgM	1 x 1.0 mL	IVD, CE, HC
2015-0090	ACCURUN 155 Series 2000	Syphilis (Treponema pallidum) IgG	3 x 2.0 mL	IVD, CE, HC
2015-0092			12 x 3.5 mL	
2015-0093	ACCURUN 155 Series 5000	Syphilis (Treponema pallidum) IgG	3 x 2.0 mL	IVD, CE, HC
2015-0094	ACCURUN 156	Syphilis (RPR)	3 x 1.0 mL	IVD, CE, HC
2015-0097	ACCURUN 190	Anti-Trypanosoma cruzi (Chagas)	6 x 3.5 mL	IVD, CE

ACCURUN Negative Serology Controls

Material #	Product Name	Markers	# Vials x Fill Size	Compliance	
2010-0013	ACCURUN 1	Negative for Anti-HIV-1, Anti-HIV-2, Anti-HCV, Anti-HBc, Anti-HTLV-I,	1 x 5.0 mL	N/D 05 110	
2010-0015	ACCURUNT	Anti-HTLV-II, HBsAg, Anti-CMV, HIV-1 Ag, Anti-Treponema pallidum	12 x 3.5 mL	IVD, CE, HC	
2010-0018	ACCURUN 800 ToRCH	Negative for Anti-Toxoplasma, Anti-Rubella, Anti-CMV, Anti-HCV, Anti-HIV-1, Anti-HIV-2, Anti-HSV, Anti-HTLV, and HBsAg	1 x 1.0 mL	IVD, CE, HC	
2010-0020	ACCURUN 810	Negative for Anti-HIV-1, Anti-HIV-2, Anti-HCV, Anti-HBc, Anti-HTLV-I, Anti- HTLV-II, Anti-CMV, Anti-HBe, Anti-HBs, Anti-HAV, HAV IgM, HBc IgM, HBeAg, HBsAg, Anti-Treponema pallidum, Syphilis RPR, Lyme IgG, Lyme IgM	6 x 3.5 mL	IVD, CE, HC	

ACCURUN Positive Molecular Controls

Material #	Product Name	Markers	# Vials x Fill Size	Compliance
2020-0078	ACCURUN 305 Series 150	HCV RNA	10 x 1.2 mL	IVD, CE, HC
2020-0080	ACCURUN 305 Series 100	HCV RNA	5 x 1.0 mL	IVD, CE, HC
2020-0083	ACCURUN 305 Series 300	HCV RNA	5 x 1.0 mL	IVD, CE, HC
2020-0085	ACCURUN 305 Series 400	HCV RNA	5 x 4.0 mL	IVD, CE, HC
2020-0086	ACCURUN 306 Series 500	HCV RNA	10 x 0.5 mL	RUO
2020-0087	ACCURUN 315 Series 150	HIV-1 RNA	10 x 1.2 mL	IVD, CE, HC
2020-0090	ACCURUN 315 Series 200	HIV-1 RNA	5 x 1.0 mL	IVD, CE, HC
2020-0092	ACCURUN 315 Series 400	HIV-1 RNA	5 x 1.0 mL	IVD, CE, HC
2020-0093	ACCURUN 315 Series 500	HIV-1 RNA	5 x 1.0 mL	IVD, CE, HC
2020-0096	ACCURUN 325 Series 200	HBV DNA	5 x 4.0 mL	IVD, CE
2020-0098	ACCURUN 325 Series 700	HBV DNA	5 x 4.0 mL	IVD, CE
2025-0067	ACCURUN 342 Series 100	Ct/Ng Nucleic Acid	10 x 1.0 mL	IVD, CE
2025-0068	ACCURUN 342 Series 700	Ct/Ng Nucleic Acid	10 x 1.0 mL	IVD, CE

ACCURUN Positive Molecular Controls (continued)

Material #	Product Name	Markers	# Vials x Fill Size	Compliance
2020-0104	ACCURUN 345 Series 150	HBV DNA, HCV RNA, HIV-1 RNA	5 x 1.0 mL	IVD, CE, HC
2020-0105	ACCONON 343 Sches 130		5 x 4.0 mL	IVD, CE, NC
2025-0037	ACCURUN 372 Series 400	HPV Type 16 DNA	10 x 0.8 mL cell suspension 10 x 2.0 mL diluent	IVD, CE
2025-0041	ACCURUN 372 Series 600	HPV Type 16 DNA	10 x 1.0 mL cell suspension 10 x 1.0 mL diluent	IVD, CE
2025-0043	ACCURUN 378 Series 5000	HPV Type 16 DNA	20 x 4.0 mL	IVD, CE, HC
2025-0060	ACCURUN 381	HPV Type 16 and 18 mRNA	20 x 1.0 mL	IVD, CE
2050-0008	ACCURUN 501	C. diff - 4 unique strains	4 x 0.6 mL	IVD, CE

ACCURUN Negative Molecular Controls

Material #	Product Name	Markers	# Vials x Fill Size	Compliance
2035-0007	ACCURUN 803	Negative for HBV DNA, HCV RNA, HIV-1 RNA	10 x 1.2 mL	IVD, CE, HC
2025-0061	ACCURUN 841	Negative for Ct/Ng	10 x 1.0 mL	IVD, CE
2035-0009	ACCURUN 872	Negative for HPV DNA	10 x 1.0 mL cell suspension 10 x 1.0 mL diluent	IVD, CE
2035-0005	ACCURUN 873	Negative for HPV DNA	20 x 4.0 mL	IVD, CE, HC

ACCURUN Genetic Reference Materials

Material #	Product Name	Markers	# Vials x Fill Size	Compliance
2040-0038	ACCURUN 611	Factor II, Factor V, and MTHFR	20 x 10 μL	RUO
2040-0015	ACCURUN 644	Cystic Fibrosis (47 mutations)	1 x 100 μL	RUO
2040-0009	ACCURUN 676	Cystic Fibrosis (34 mutations)	1 × 100 μL	RUO







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