LifeLabs®

Health Care Providers Newsletter
September 2021

Change to Ordering Process for ANA and ENA

Dr. William E. Schreiber, Biochemist, MD, FRCPC

Following a Record of Decision issued by the BC Ministry of Health, LifeLabs is changing the way Antinuclear antibodies (ANA) and Extractable nuclear antigens (ENA) are ordered and performed, starting August 8, 2021. The Record of Decision supports improved clinical utilization of this testing.

Previously, ANA and ENA could be ordered separately or together. Moving forward, ENA testing will not be conducted unless the patient has a positive ANA test within the previous 12 months.

Testing for ANA is the first step when screening for one of the systemic autoimmune rheumatic diseases (SARD). If the test is negative, the patient is highly unlikely to have one of the SARDs.

In patients with an ANA titer of 1:320 or higher, ENA testing will automatically be performed by LifeLabs as a reflex test. When the titer for a positive ANA test is 1:80 or 1:160, ENA can still be ordered by a health care provider, but it will not be done automatically.

If ENA is ordered by itself and no ANA test has been performed in the past year, then an ANA test will be run on the patient specimen. The results of the ANA test will determine whether ENA testing is performed.

ANA testing will only be covered by MSP once annually. LifeLabs offers ANA and ENA testing to a private pay basis to patients that do not meet these criteria.

Have a Question? Ask a Laboratory Medicine Doctor!

Diana Whellams, Medical Microbiologist, MD, FRCPC

Did you know that LifeLabs BC has a team of doctors who are available to answer your laboratory testing questions?

LifeLabs BC's Medical Scientific staff include clinical and medical biochemists, hematologists and microbiologists. In addition to working in the laboratory, we can assist health care providers with questions about ordering and interpreting lab test results. We regularly answer questions on a range of topics— everything from choosing a collection container to recommending follow-up testing to discussing interfering substances.

To speak with one of the Medical Scientific staff, contact our customer care centre at 1-800-431-7206. From there your request will be referred to the appropriate staff member (a chemist, hematologist or microbiologist) depending on the issue. Someone will respond within one business day (though the majority of these calls are handled on the same day as the request).

Clinical Pearls: Helpful tips for lab testing and interpretation—Monospot

Dr. Diana Whellams, Medical Microbiologist, MD, FRCPC

Photo credit: Manfred Heyde

Question: A monospot (heterophile antibody) test on an 18 year-old male with fatigue is positive. A review of past testing from a different health care provider reveals another positive test 9 months prior. How is this explained?

Answer/Explanation: The monospot test uses latex particles coated with bovine red cells that clump in the presence of patient antibodies to Epstein-Barr virus (EBV). It's a rapid, inexpensive and relatively simple test for infectious mononucleosis, but does have limitations. False-negative results are common in young children and within the first 2 weeks of infection. False-positive results occasionally occur in patients with other infections (including cytomegalovirus, hepatitis A and E, rubella, HIV, leptospirosis and malaria) and in some non-infectious conditions such as lymphoma and rheumatoid arthritis. It's also not uncommon for a monospot to remain positive for several months—or rarely for a year or more.

In this case, the patient's symptoms and their timing could be helpful in determining whether he had/has infectious mononucleosis, as could EBV serology. Antibodies to viral capsid antigen (VCA) are usually positive 7-10 days post infection while antibodies to early antigen (EA) take weeks-months to appear, and antibodies to nuclear antigen (NA) are usually absent before 2 months after symptom onset. VCA antibodies may also be divided into IgG (which persist for years) and IgM (which are generally undetectable after 3 months). Hence serology can be another way of checking for EBV infection and timing in the occasional cases where monospot testing is difficult to interpret.

Scabies Sample Collection

Dr. Miguel Imperial, Medical Microbiologist, MD, FRCPC

Scabies is an itchy skin infestation caused by the mite *Sarcoptes scabei*. Signs of infection include erythematous papules in areas of the body with thin skin such as the webs of fingers, the wrist, and the axillae.

Skin scrapings are the diagnostic method of choice for scabies. LifeLabs provides collection kits that include a scalpel blade, 2 glass slides, and a transport container. Health care providers should coat a papule with mineral oil, scrape vigorously to remove a portion of the epidermis, transfer the scraped material and oil onto a glass slide, and cover with the additional slide before securing the slides together with tape or an elastic band and placing into the transport container. Slides should be labelled with the patient's name, PHN or date of birth, and the date of collection. On receipt in the laboratory, skin scrapings will be examined for mites or their feces to make a diagnosis.

Samples received on a single slide may be rejected because material may fall off the slide, limiting the sample examination and posing an infection risk to lab staff.

For collection instructions, see https://lifelabs.azureedge.net/lifelabs-wp-cdn/2020/05/Scabies-Skin-Scrapings-Collection-Instructions.pdf

To order scabies collection kits, go to https://www.lifelabs.com/healthcare-providers/supplies/

Changes to Urinalysis Testing

Cheryl Tomalty, Clinical Biochemist, PhD, FCACB

LifeLabs is upgrading macroscopic and microscopic urinalysis instrumentation at our labs in British Columbia starting September 2021. The new instrumentation has shown similar or improved precision, accuracy, and sensitivity during our validation. With the change to this new instrumentation, LifeLabs is aligning our urinalysis processes and reporting across sites.

What does this change mean for you?

The new platform will and deliver improved clinical information to our customers through standardized reports and reference intervals. (See below for updated reference intervals).

When will this new instrumentation go live?

We are planning for this new instrumentation to go live on Vancouver Island, BC on September 13, 2021. For the rest of BC, the new instrumentation will go live within the next few months. Once implemented at each site, we will include a comment on our reports indicating the new methodology.

Changes to reference intervals — Chemicals

GLUCOSE	**Current**			**NEW**
Platform/ Standard units	Lower Mainland Velocity (mmol/L)	Vancouver Island Siemens Atlas (mmol/L)	Region (Prince George/ Kamloops/ Terrace)	(All of BC LifeLabs) Siemens Novus (mmol/L)
Negative	<2.8	<6	Negative	Negative (Ref. Interval)
Trace	2.8	<6	3	5.5
1+	8.3	14	6	14
2+		28	17	28
3+	≥28	≥55	56	≥55

WBC	**Current**			**NEW**
Platform/ Standard Units	Lower Mainland Velocity (Leu/uL)	Vancouver Island Siemens Atlas (Leu/ul)	Region (Prince George/ Kamloops/ Terrace) Roche 411 (Leu/uL)	(All of BC LifeLabs) Siemens Novus (Leu/uL)
Negative	<25	Negative	Negative	Negative (Ref. Interval)
Trace	25	Trace	25	15
1+	75	1+		70
2+	250	2+	100	125
3+	500	3+	500	500

Changes to reference intervals — Chemicals…continued

PROTEIN	Current			NEW
Platform/ Standard Units	Lower Mainland Velocity (g/L)	Vancouver Island Siemens Atlas (g/L)	Region (Prince George/ Kamloops/ Terrace) Roche 411 (g/L)	(All of BC LifeLabs) Siemens Novus (g/L)
Negative	<0.3	<0.3	Negative	Negative (Ref. Interval)
Trace		<0.3	0.25	Trace
1+	0.3	0.3	0.75	0.3
2+	1.0	1.0	1.5	1.0
3+	≥5	≥3.0	5.0	3.0
4+				≥10

KETONES	Current			NEW
Platform/ Standard Units	Lower Mainland Velocity (mmol/L)	Vancouver Island Siemens Atlas (mmol/L)	Region (Prince George/ Kamloops/ Terrace) Roche 411 (mmol/L)	(All of BC LifeLabs) Siemens Novus (mmol/L)
Negative	<0.5	<1.5	Negative	Negative (Ref. Interval)
Trace	0.5	<1.5	0.5	Trace
1+	2	1.5	1.5	1.5
2+		4.0		3.9
3+	≥8	≥8.0	5.0	7.8
4+			15	≥15.6

Hb	Current			NEW
Platform/ Standard Units	Lower Mainland Velocity (mmol/L)	Vancouver Island Siemens Atlas (mmol/L)	Region (Prince George/ Kamloops/ Terrace) Roche 411 (mmol/L)	(All of BC LifeLabs) Siemens Novus (mmol/L)
Negative	<0.3	Negative	Negative	Negative
Trace	0.3	Trace	10	Trace
1+		1+	25	25
2+	2	2+	50	80
3+		3+	150	200
4+	>10		250	

Reference intervals for pH, specific gravity, and nitrites remained unchanged with the introduction of the new test platform.

Changes to Microscopy Reporting:

Parameter	Changes
RBC	No change to reference interval of 0-2 / HPF
WBC	No change to reference interval of 0-5 / HPF
Non Squamous Epithelial cells	New reporting will include renal and transitional epithelial cells
	No change to reference interval of 0-5 / HPF
Squamous Epithelial cells	Now reported on all patients even if negative
	No reference interval as it is not a pathological finding
	Reported as /HPF
Pathological Casts	Now reported on all patients even if negative
	Reference interval is Negative
	Now reported as /HPF instead of /LPF
Crystals	Now reported on all patients even if negative
	No reference interval but if seen will be reported in the abnormal column
Hyaline Casts	Now reported when seen
	No reference interval
	Reported as /HPF
Other elements that will be reported when seen: • Yeast • Lipids: Oval Fat Bodies, Free Fat Droplets • Mucus (if significant) • Sperm and Trichomonas for patients <16 years old only	

LifeLabs is excited about this implementation and the benefits it will deliver to our customers. If you have any questions or concerns, please don't hesitate to call 1-800-431-7206 to speak with a biochemist.