

KOVA Liqua-Trol® with Microscopics Level II (Normal with hCG) Urinalysis Control

KOVA Liqua-Trol	Lot No: K302739							Expiration Date: 2019-10		
CONSTITUENT	REAGENT TEST STRIP RESULTS ¹								BIOSYS ^j UriScan Optima™ and Optima II™ PSS® Select Consult® Diagnostics	IRIS REAGENT STRIP ⁱ iChem® Velocity™
	SIEMENS REAGENT STRIP ^a									
	Visual	Clinitek®50	Clinitek®STATUS	Clinitek®100	Clinitek® 500 / Advantus	Clinitek®Atlas	Clinitek® Novus			
pH	6.0 - 7.0	6.0 - 7.0	5.5 - 7.0	6.0 - 7.0	5.5 - 7.0	6.0 - 7.0	6.0 - 7.0		6.0 - 7.0	6.0 - 7.0
Protein	Negative	Negative	Negative	Negative	Negative	Negative	Negative		Negative	Negative
Glucose	Negative	Negative	Negative	Negative	Negative	Negative	Negative		Negative	Negative
Ketones	Negative	Negative	Negative	Negative	Negative	Negative	Negative		Negative	Negative
Bilirubin	Negative	Negative	Negative	Negative	Negative	Negative	Negative		Negative	Negative
Blood (hemoglobin)	Negative	Negative	Negative	Negative	Negative	Negative	Negative		Negative	Negative
Nitrite	Negative	Negative	Negative	Negative	Negative	Negative	Negative		Negative	Negative
Urobilinogen	0.2 - 1 EU/dL	0.2 - 1.0 EU/dL	0.2 - 1.0 EU/dL	0.2 - 1.0 EU/dL	0.2 - 1.0 EU/dL	0.2 - 1.0 EU/dL	0.2 - 1.0 EU/dL		Normal	Normal
Specific Gravity	1.005 - 1.015	≤ 1.005 - 1.015	≤ 1.005 - 1.020	≤ 1.005 - 1.020	≤ 1.005 - 1.015	≤ 1.005 - 1.015 ⁵	≤ 1.005 - 1.015 ⁵		≤ 1.005 - 1.020	1.005 - 1.015 ⁵
Leukocyte Esterase ³	Negative	Negative	Negative	Negative	Negative	Negative	Negative		Negative	Negative
Microalbumin	N/A	≤ 10 mg/L ⁴	≤ 10 mg/L ⁴	≤ 10 mg/L ⁴	N/A	N/A	≤ 10 mg/L ⁷		N/A	N/A
Creatinine	100 - 300 mg/dL	100 - 300 mg/dL ⁴	100 - 300 mg/dL ⁴	100 - 300 mg/dL ⁴	100 - 300 mg/dL	N/A	100 - ≥ 300 mg/dL ⁷		N/A	N/A
Ascorbic Acid	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	Negative

PHYSICAL CHARACTERISTICS

Property	Value Range	Method
Appearance	Clear	Visual
Color	Yellow - Green	Visual
Specific Gravity	1.003 - 1.007	Refractometer (Room Temp.)
Osmolality	200 - 300 mOsm	Freezing Pt. Depression
pH	6.0 - 7.0	pH meter

ALTERNATIVE TESTS

Constituent/Method	Value Range
Bilirubin/Ictotest ^a	Negative
Protein/Sulfosalicylic Acid (3%)	
Qualitative	Negative

MICROSCOPIC QUALITY CONTROL CELL COUNTS ^{2,3}

Constituent	Fixed Rotor	Swing Rotor	DIRUI ^h FUS-100	Iris ⁱ iQ200	Siemens ^a Atellica UAS 800	UriSed Variants ^c COBIO Variants
Qualitative ^f						
Red Cells/hpf	0 - 1	0 - 1	---	---	0 - 1	0 - 2
White Cells/hpf	0 - 6	0 - 7	---	---	1 - 4	0 - 8
Quantitative ^g						
Red Cells/μL [†]	0 - 1	0 - 1	---	0 - 1	0 - 1	0 - 5
White Cells/μL [†]	0 - 9	1 - 25	---	0 - 3	5 - 16	0 - 35
Crystals ^{***}	≤ 1	≤ 1	---	---	---	---
Casts (low power)	< 1	< 1	---	---	---	---

† Iris iQ200 cells/hpf.
*** Urinary artifacts may be present.

PREGNANCY TESTING

Method	Result
Beckman Coulter ICON® 20 hCG ^e	Positive
Quidel QuickVue® hCG ^d	Positive
Siemens Clinitek® hCG ^a	Positive

Note: Other manufacturers' methods will work and should be confirmed by the laboratory.

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	ROCHE REAGENT STRIP ^b							77 ELEKTRONIKA REAGENT STRIP ^c		
	Combur-Test® Visual	Chemstrip® Visual	Chemstrip Criterion II™	URISYS 1800™	URISYS 1100™	Cobas® U 411	URISYS® 2400	ChoiceLine 10® Visual	HandUReader, DocUReader, DocUReader 2, LabUReader, LabUReader Plus, LabUReader Plus 2, LabUMat, LabUMat 2, Visual Reading	
pH	6 - 7	6 - 7	6 - 7	6 - 7	6 - 7	6 - 7	6 - 7	6.0 - 7.0	6 - 7	6 - 7
Protein	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Glucose	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Ketones	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative ⁶	Negative	Negative
Bilirubin	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Blood (hemoglobin)	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Nitrite	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Urobilinogen	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Specific Gravity	1.005 - 1.015	1.005 - 1.015	1.005 - 1.015	1.005 - 1.015	1.005 - 1.015	1.005 - 1.015	1.005 - 1.015 ⁵	1.005 - 1.015	1.005 - 1.025	1.005 - 1.025
Leukocyte Esterase ³	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
Microalbumin	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Creatinine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ascorbic Acid	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Negative	Negative

- Methodology changes or variability in reagent strip lots can influence Liqua-Trol recoveries. It is recommended that the values listed here be used as guidelines until the laboratory has established its own quality control ranges.
- The cell count ranges apply to a microscopic field viewed using a 10X wide eyepiece and a 40X objective lens. The approximate diameter of such a field under high power magnification is 0.50 mm; therefore, an appropriate correction factor should be applied when a microscope with a different field size is used in order to maintain consistency in reporting results.
- A microscopic examination of the sedimentation is recommended in conjunction with a screening test for leukocyte esterase to detect lysed leukocytes. Testing for leukocyte esterase should not be used to replace microscopic analysis as significant and often critical pathologically diagnostic elements will go undetected.
- Creatinine and microalbumin values are assigned with Siemens Microalbumin strips on the Clinitek 50, STATUS, and 100 only.
- Value assigned with Normal system settings at .005 increments.
- An atypical cream color for negative Ketone maybe observed.
- Values assigned for international use only.

- a Siemens Medical Solutions Diagnostics
 b Roche Diagnostics
 c 77 Elektronika KFT (For International Use Only)
 d Quidel Corporation
 e Beckman Coulter Inc.
 f Using KOVA® System with KOVA® Slide II, KOVA® Glasstic® Slide 10
 g Using KOVA® System with KOVA® Glasstic® Slide 10 with Grids
 h DIRUI Industrial Co., Ltd (For International Use Only)
 i Iris Diagnostics
 j BIOSYS Laboratories Inc.
 k ARKRAY, Inc.
 l McKesson Medical-Surgical / Consult Diagnostics



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CONSTITUENT	REAGENT TEST STRIP RESULTS ¹				
	DIRUI ^h DIRUI REAGENT STRIP® DIRUI H-800	McKesson ^l Consult® Diagnostics REAGENT STRIPS 120 Urine Analyzer	ARKRAY ^k Aution Reagent Strip Aution Hybrid™ AU-4050		
pH	6.0 - 7.0	6.0 - 7.0	6.0 - 7.0		
Protein	Negative	Negative	Negative		
Glucose	Negative	Negative	Negative		
Ketones	Negative	Negative	Negative		
Bilirubin	Negative	Negative	Negative		
Blood (hemoglobin)	Negative	Negative	Negative		
Nitrite	Negative	Negative	Negative		
Urobilinogen	0.2 - 1 mg/dL	0.2 - 1 mg/dL	Normal		
Specific Gravity	1.005 - 1.015	1.005 - 1.020	1.000 - 1.010 ⁵		
Leukocyte Esterase ³	Negative	Negative	Negative		
Microalbumin	10 mg/L	N/A	N/A		
Creatinine	100 - 300 mg/dL	N/A	N/A		
Ascorbic Acid	N/A	N/A	N/A		

- Methodology changes or variability in reagent strip lots can influence Liqua-Trol recoveries. It is recommended that the values listed here be used as guidelines until the laboratory has established its own quality control ranges.
- The cell count ranges apply to a microscopic field viewed using a 10X wide eyepiece and a 40X objective lens. The approximate diameter of such a field under high power magnification is 0.50 mm; therefore, an appropriate correction factor should be applied when a microscope with a different field size is used in order to maintain consistency in reporting results.
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