

## Pet Doctors Veterinary Supplies and Services

### Chemistry Test Report

Pet Name: Olek

Owner Name: Mark Cuario

Species: Canine

Gender: Male

Age: 7 Years

Patient or Visit No.:

Sample ID: 2604210002

Sample Type: Serum

Time Tested: 21/04/2026 18:31:38

Test Panel: Comprehensive 24 Profile

Tip: Lipemia

| Test     | Result | Unit     | Reference Range | Low | Normal | High |                             |
|----------|--------|----------|-----------------|-----|--------|------|-----------------------------|
| TP       | 84.5   | ↑ g/L    | 52-82           |     |        |      | Whole Body                  |
| ALB      | 24.3   | g/L      | 22-44           |     |        |      | Liver, Kidney               |
| GLOB     | 60.2   | ↑ g/L    | 20-52           |     |        |      | Whole Body                  |
| ALB/GLOB | 0.4    |          |                 |     |        |      | Calculated value            |
| TBIL     | 32.06  | ↑ umol/L | 2-15            |     |        |      | Whole Body, Liver           |
| GGT      | 3.9    | U/L      | 0-7             |     |        |      | Liver                       |
| AST      | 85     | ↑ U/L    | 8.9-55          |     |        |      | Liver                       |
| ALT      | 49     | U/L      | 10-140          |     |        |      | Liver                       |
| AST/ALT  | 1.73   |          |                 |     |        |      | Calculated value            |
| ALP      | 442    | ↑ U/L    | 20-150          |     |        |      | Liver                       |
| TBA      | 49.1   | ↑ umol/L | 0-20            |     |        |      | Liver, Gallbladder          |
| AMYL     | 1396   | U/L      | 200-1800        |     |        |      | Pancreas                    |
| CK       | 302    | ↑ U/L    | 20-200          |     |        |      | Myocardium, Skeletal muscle |
| CREA     | 419    | ↑ umol/L | 27-149          |     |        |      | Kidney                      |
| BUN      | 22.1   | ↑ mmol/L | 2.5-11.5        |     |        |      | Kidney                      |
| BUN/CREA | 13     |          |                 |     |        |      | Calculated value            |
| GLU      | 4.28   | mmol/L   | 3.89-7.95       |     |        |      | Whole Body                  |
| CHOL     | 9.69   | ↑ mmol/L | 2.84-8.26       |     |        |      | Whole Body                  |
| TRIG     | ≥9.04  | ↑ mmol/L | 0.1-0.9         |     |        |      |                             |
| tCO2     | 12     | mmol/L   | 12-27           |     |        |      | Whole Body                  |
| Ca       | 2.42   | mmol/L   | 1.98-2.95       |     |        |      | Whole Body                  |
| PHOS     | 2.02   | mmol/L   | 0.81-2.2        |     |        |      | Kidney                      |
| Ca×P     | 61     | mg/dL    |                 |     |        |      |                             |
| Mg       | 1.12   | ↑ mmol/L | 0.6-1.09        |     |        |      |                             |

#### Clinical Significance

|      |   |
|------|---|
| TP   | <b>Elevated levels:</b> ① Dehydration; ② Increased albumin; ③ Increased immunoglobulin: myeloma, infectious diseases, etc.  |
| GLOB | <b>Elevated levels:</b> ① Tumors: lymphoma, multiple myeloma, etc.; ② Infectious diseases: bacterial, fungal, parasitic, protozoal, viral; ③ Immune-mediated/inflammatory: hepatitis, nephritis, purulent diseases, allergies, IMHA, lupus erythematosus, polyarthritis, etc.   |
| TBIL | <b>Elevated levels:</b> ① Pre-hepatic diseases or hemolysis: canine ehrlichiosis, canine and feline babesiosis, onion poisoning, and other hemolytic diseases; ② Hepatic diseases: cholestatic hepatitis, infectious canine hepatitis, leptospirosis, bacterial hepatitis, cirrhosis, etc.; ③ Post-hepatic diseases: biliary obstructive diseases, gallstones, etc.; ④ Acute and chronic hepatitis, biliary tract obstruction, acute necrotic hepatitis, metastatic liver cancer, hemolytic jaundice, post-transfusion hemolysis, malignant anemia. |
| AST  | <b>Elevated levels:</b> ① Hepatic system diseases; ② Hemolysis, lipemia causing false elevation; ③ Equine paralytic myoglobinuria; ④ Cardiac injury: myocarditis, myocardial infarction; ⑤ Skeletal muscle diseases: canine degenerative myopathy, muscle injury; ⑥ Drug/toxin effects: barbiturates, corticosteroids, nonsteroidal anti-inflammatory drugs, ketoconazole, etc.   |
| ALP  | <b>Elevated levels:</b> ① Primary or metastatic tumors; ② Acute toxic liver injury; ③ Normal in young growing animals; ④ Bone marrow diseases causing increased osteoblast activity; ⑤ Hemolysis, lipemia, hyperbilirubinemia causing false elevation; ⑥ Drug/toxin effects: corticosteroids, barbiturates, aflatoxins, etc.; ⑦ Hepatobiliary diseases: cholangitis, chronic hepatitis, cirrhosis, hepatic lipidosis, etc.; ⑧ Endocrine diseases: hyperthyroidism, hyperadrenocorticism, diabetes.  |
| TBA  | <b>Elevated levels:</b> ① Significantly elevated in acute hepatitis; ② Chronic hepatitis, cirrhosis, liver cancer; ③ Congenital or acquired portosystemic shunts; ④ Cholestasis: biliary disease, acute and chronic biliary obstruction.  |
| CK   | <b>Elevated levels:</b> ① Myocardial necrosis; ② Strenuous exercise; ③ Prolonged recumbency; ④ Skeletal muscle injury; ⑤ Neurological disease; ⑥ Hypothyroidism; ⑦ Hemolysis or intramuscular injection during blood draw.  |



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|      |   |
|------|---|
| CREA | <b>Elevated levels:</b> ① Pre-renal conditions: insufficient renal perfusion, dehydration, extensive muscle damage; ② Renal diseases: severe renal diseases; ③ Post-renal: urethral obstruction; ④ Physiological increase: animals with rich muscle tissue.   |
| BUN  | <b>Elevated levels:</b> ① Pre-renal: dehydration, high-protein diet, gastrointestinal bleeding, shock, hypoalbuminemia; ② Renal: acute/chronic interstitial nephritis, acute renal tubular necrosis, chronic renal failure, chronic glomerulonephritis, amyloidosis, pyelonephritis, tumors; ③ Post-renal: urinary tract obstruction (stones, tumors, prostatic diseases, feline lower urinary tract disease), bladder rupture. |
| CHOL | <b>Elevated levels:</b> ① Hypothyroidism; ② Diabetes mellitus; ③ Severe trauma; ④ Acute pancreatitis; ⑤ Lipodystrophy; ⑥ Protein-losing nephropathy; ⑦ Spontaneous hyperlipidemia; ⑧ Hepatic injury, biliary obstruction; ⑨ Hyperadrenocorticism; ⑩ Physiological increase after a fatty meal, high-fat diet.   |
| TRIG | <b>Elevated levels:</b> ① Hypothyroidism; ② Diabetes mellitus; ③ Pancreatitis; ④ Cholestasis; ⑤ Fasting (obesity); ⑥ Spontaneous hyperlipidemia; ⑦ Hyperadrenocorticism; ⑧ Spontaneous hyperchylomicronemia; ⑨ Physiological increase after a fatty meal.   |
| Mg   | <b>Elevated levels:</b> ① Hemolysis; ② Renal failure; ③ Hepatic disease; ④ Diabetic coma; ⑤ Hypothyroidism; ⑥ Obstructive uropathy; ⑦ Adrenocortical insufficiency.   |

Veterinary Technician:Dr. Cassandra Oyan

Attending Veterinarian:Dr. John Paul Landingin

Date Reported:22/04/2026

**This report is solely for the received sample and serves as a diagnostic reference for veterinarians.**



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