



Mythic 18 VET M-PACK Reagents

REF:	HMVET-010	
Cleaner		300 ml
Lysing Reagent		70 ml
Diluent		2 l

INTENDED USE

Reagents are a functional kit that allows to perform a blood test on Mythic 18 VET haematology analyzer.
The reagents must be used only for *in vitro* diagnostic, by suitably qualified laboratory personnel, only for the intended purpose, under appropriate laboratory conditions.

METHOD PRINCIPLE

The counting of the cellular elements in a blood sample is done with the impedance technique. This technique is based on the modification of the impedance of a calibrated aperture soaking in an electrolyte and going through a constant course delivered by two electrodes located on both sides of the aperture.
A vacuum applied on a side of the aperture allows the cells passage. They oppose their physical volume to the course passage. A voltage impulse is registered at the electrodes terminal. The height of this impulse is proportional to the cell volume.
The hemoglobin measurement is directly done in the WBC chamber, by spectrophotometry at 555 nm. Hemoglobin is detected by formation of a chromogen oxyhemoglobin for lytic solution without cyanide.
The leukocyte analysis is done by impendancy in the WBC counting chamber.
The erythrocyte analysis is done by impendancy in the RBC counting chamber and by analysis of the hemoglobin inside WBC chamber. Platelet analysis is made by impendancy in the RBC counting chamber at the same time than red blood cells

ACTIVE COMPONENTS		
Cleaner	Lysing Reagent	Diluent
- Borate buffer - Proteolytic enzyme - Detergent - NaCl - Preservative	- Quaternary amines - Ammonium oxalate - Polyethylene glycol - NaCl - Preservatives	- Borate buffer - Sodium sulfate - anhydrous - Ion chelator - Preservatives

DILUENT: Isotonic solution use to sample dilution.

The reagent is used to dilute blood cells before counting and measure the haemoglobin blank.
In combination with the lysing reagent diluent allows to differentiate population of leukocytes.

CLEANER: Cleaning solution.

This solution is used to wash and keep the measuring system of MYTHIC 18 VET analyzer clean. The presence of an enzyme reduces the formation of proteins deposit and protect the analyzer's hydraulic system against obstruction.

LYSING REAGENT: Erythrocyte lysing agent to allow the measurement of the haemoglobin, counting and differentiation of the white blood cells.

Use in combination with the diluent, this reagent lyses the red blood cells and protects the state of the leukocytes to permit the differentiation in three populations (lymphocytes, monocytes, granulocytes).

COLLECTION AND STORAGE

MYTHIC 18 VET is an automated analyzer performing haematological analysis on whole blood collected on K₂- or K₃-EDTA tubes.
The samples should be used at room temperature no longer than 6 hours after collection. If the analysis can not be done in the time, the samples should be stored at 2-8°C up to 12h.¹

PROCEDURE

- Before running the analysis, the sample should be precisely mixed and evaluated for the presence of blood clots.
- Perform the determination according to the User Manual for the analyzer.

STORAGE AND STABILITY

The reagents must be stored between 18°C and 30°C.
The reagents must be used before the expiry date indicated on the label.
Open vial stability of the reagents is 90 days.

WARNING

- Follow the analyzer's operator manual.
- Wear protective equipment.
- Avoid release to sewerage system or to environment.
- Please refer to the MSDS for detailed information concerning safe storage and use of the product.
- Carryover effect for general determinations such as: WBC, RBC, PLT, HGB is <2%.

QUALITY CONTROL

For quality control it is recommended to use the control blood Myt3D VET (Cat. No MYT303-VET).

CALIBRATION

Information on calibration can be found in the User Manual for the analyzer.

For calibration of Mythic 18 VET analyzer MYT-CAL VET (Cat. No MYTCAL2-VET) should be used.

REFERENCE VALUES^{2,3,4}

The reference values are the range in which the obtained laboratory test result was determined on the basis of multiple measurements in healthy individuals. These values should designate each laboratory independently. The range of reference values may differ from a given species after taking into account such aspects as: age, sex, health status, activity or region.

PARAMETER	REFERENCE VALUES *			
	CATS	DOGS	HORSES	CATTLE
RBC (x10 ⁶ /µl)	5,8-11,0	5,4-8,5	5,5-12,0	5,0-10,0
HGB (g/dl)	8-15	12-19	8-18	8-15
HCT (%)	24-47	37-57	24-52	24-46
MCV (fl)	39-55	60-77	35-58	37-60
MCH (pg)	13-18	19-27	10-20	11-18
MCHC (g/dl)	30-36	32-36	31-37	30-37
RDW-CV (%)	14-25	10-19	14-27	16-24
WBC (x10 ³ /µl)	5,5-19,5	6,0-16,5	5,5-13,0	4,0-12,0
LYM (x10 ³ /µl)	1,5-7,0	0,4 -3,0	1,1-5,3	2,5-7,5
MON (x10 ³ /µl)	0,1-1,0	0,1-1,4	0,1-1,0	0,1-0,8
GRA (x10 ³ /µl)	2,5-12,5	3,0-12,0	2,5-8,5	0,6-4,0
LYM (%)	20-55	12-30	15-50	45-75
MON (%)	1-5	3-10	2-6	2-7
GRA (%)	35-75	60-80	35-75	15-50
PLT (x10 ³ /µl)	200-800	200-500	100-400	150-730
MPV	8-18	6-13	5-10	5,5-7,5
PCT	0,140-0,650	0,150-0,400	0,070-0,250	0,250-0,650
PDW	17-35	10-20	24-72	10-20

* Published reference ranges for given species can be used only after prior validation by the veterinary laboratory.

WASTE TREATMENT

Chemical residues, in general, are included into special waste. Disposing of the latter is regulated by appropriate laws and ordinances. We recommend contacting the appropriate authorities, or waste disposal enterprises that will advise you on how to dispose of special waste.

LITERATURE

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