

## INTENDED USE

Boule Vet-Cal Hematology Calibrator is manufactured for calibration multi-parameter hematology analyzers.

## SUMMARY AND PRINCIPLES

Multi-parameter hematology analyzers require regular calibration in order to produce accurate results for patient samples. Calibration can be accomplished by transferring information to the analyzer through fresh blood samples, which have been assayed by reference methods. A more direct and convenient approach is to use a calibrator material with System Specific Values (SSV) assigned. Boule Vet-Cal is such a material.

Boule Vet-Cal is a stable suspension of red blood cells, white blood cells and platelets. Assigned values are derived from replicate analyses on whole blood calibrated hematology analyzers (see reference procedures). A user analyzes Boule Vet-Cal on their instrument and computes calibration factors by comparing recovered values and assigned values. These factors provide the basis for making adjustments to the instrument.

## REAGENTS

Boule Vet-Cal contains human red blood cells, mammalian and simulated white blood cells, and a platelet component in a preservative medium.

## STORAGE AND STABILITY

Boule Vet-Cal is stable through the expiration date when stored at 2° to 10° C. After opening, Boule Vet-Cal is stable throughout the open-vial dating, as indicated on the assay sheet when stored at 2° to 10° C.

## INSTRUCTIONS FOR USE

1. Perform instrument start-up and routine cleaning procedures as defined in the instrument manufacturer's operator manual (i.e., blood sampling valve, counting apertures).
2. Warm Boule Vet-Cal Hematology Control at ambient temperature, 18-32°C, (approximately 30 minutes). Mix by hand as follows: **DO NOT MIX MECHANICALLY.**
  - a. Roll the tube or vial slowly between the palms of the hands 15-20 seconds in an upright position.
  - b. Invert the tube and slowly roll it back and forth for another 15-20 seconds.
  - c. Continue to mix in this manner until all cells are completely suspended. Tubes stored for a long time may require extra mixing.
  - d. Gently invert the tube 8 times immediately before sampling.
3. After open sampling, carefully wipe the rim of the tube and inside of the cap with a lint-free tissue. Replace the cap ensuring it is on tight.
4. Return the tubes to the refrigerator within 30 minutes of use.
5. Verify instrument precision. Refer to operator's manual for instructions and specifications.
6. Analyze Boule Vet-Cal a minimum of 6 times, disregard the first sample. (For auto-calibration, refer to procedure in the user's manual). Record the values recovered on the remaining 5 samples.
7. Calculate the mean for each parameter.
8. Compare the results of your calculations to the values listed for your instrument type.
  - a. If the difference between your recovered mean values and the system values are less than the listed tolerance limits, the instrument does not require calibration.
  - b. If the difference is greater, calibrate using the system specific values.
9. Calibration of the specific parameter(s) should be done in accordance with the procedure in your instrument manual. Calibration may not be required for all parameters.
10. Verify calibration by analyzing Boule Vet-Cal three times and repeat steps 7 and 8.
11. For further assistance, please contact your local distributor.

## INDICATION OF PRODUCT DETERIORATION

Gross hemolysis (darkly colored supernatant) may be indicative of product deterioration or damage. If this is apparent, contact your local distributor.

## PRECAUTIONS

- For Veterinary diagnostic use.
- All human source material used to manufacture this product was non-reactive for antigens to Hepatitis B and negative by tests for antibodies to HIV (HIV-1, HIV-2) and Hepatitis C using techniques specified by the U.S. Food and Drug Administration. Because no known test method can assure complete absence of human pathogens, this product should be handled with appropriate precautions.
- This product should not be disposed in general waste but should be disposed with infectious medical waste. Disposal by incineration is recommended.
- This product is intended for use as supplied. Adulteration by dilution or addition of any materials to the product as supplied invalidates any diagnostic use of the product.



## HAZARD INFORMATION

Any hazard related to the content of a consumable is indicated by a hazard code on the product label. See table below. For more information refer to the relevant Safety Data Sheet (SDS) at [www.boule.com](http://www.boule.com).

Hazard Code	Explanation
EUH 208	Contains a reaction mass of 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ON and 2-METHYL-2H-ISOTHIAZOL-3-ON. May produce an allergic reaction.
EUH 210	Safety Data Sheet available on request.

## REFERENCE PROCEDURES

**WBC-** A series of 1:500 dilutions are made using class A glassware. The lytic reagent is placed in the initial dilution flask before diluting to volume. The diluting agent is an isotonic solution for Beckman Coulter® instruments. The samples are counted on a Beckman Coulter Counter Z instrument.

**RBC-** A series of 1:50,000 dilutions are made using class A glassware. The diluting agent is an isotonic solution for Beckman Coulter® series instruments. The samples are counted on a Beckman Coulter Counter Z instrument.

**Hgb-** Hemoglobin concentration is determined by converting hemoglobin to hemiglobincyanide (HiCN) and measuring absorbance at 540 nm according to CLSI H15-A3 and ICSH recommendations. Hemoglobin concentration is calculated using millimolar absorption coefficient of 11.0.

**HCT-** Microhematocrit values are done in replicate on each sample, with capillary tubes filled and centrifuged according to the CLSI H7-A3 document. K<sub>2</sub>EDTA is used as the anticoagulant for collection of fresh specimens. The packed cell volume, or hematocrit, is read directly using a precision metric scale. No correction is made for trapped plasma.

**Plt-** A series of 1:125 macrodilutions are prepared using class A glassware in 1% Ammonium Oxalate. Charged hemacytometers are allowed to stand 20-30 minutes. Cells are counted using phase-contrast microscopy technique.

**MPV-** Based on a method using latex particles.

## ORDERING INFORMATION AND SERVICE

Contact your local Boule representative for orders and support. Please have the catalog number ready for orders. For other assistance contact Boule Medical AB at phone +46 8 7447700 or visit [www.boule.com](http://www.boule.com)

This instruction is also available at [www.boule.com](http://www.boule.com)

Ordering no:	Description	Packaging
1504028	Boule Vet-Cal	1 x 3.0 ml