VEE GEE Specifications

Range:	Urea 0.0-60.0%
Resolution:	0.5%
Accuracy:	±0.5%
Dimensions:	40 x 40 x 145mm (1.6 x 1.6 x 5.7")
Weight:	225g (7.9 oz.)
Supplied With:	Vinyl Carrying Case (1), Plastic Transfer Pipet (1)

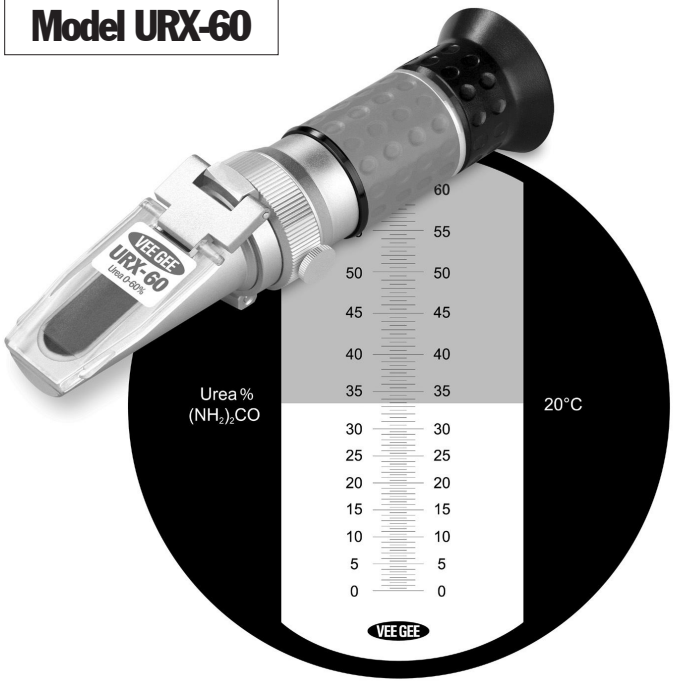
VEE GEE® Refractometers

Printed in China

VGMNL010320-43071

VEE GEE® Refractometers

Operation Manual
Model URX-60



Urea 0-60%

Cat. No. 43071

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VEE GEE Introduction

Thank you for purchasing this VEE GEE Refractometer. With the user in mind, VEE GEE Refractometers are built from modern designs and, with proper care, this instrument should provide many years of reliable performance. It's recommended this manual is read entirely before using the refratometer for the first time.

VEE GEE Refractometer Components



VEE GEE Precautions

- This refractometer is an optical instrument -- it can become damaged if dropped or handled in a rough manner.
- The prism is made of optical glass and is susceptible to scratches -- do not apply any rough or abrasive material and take care when cleaning the prism.
- After each use, clean the prism surface and daylight plate with a soft cloth or tissue soaked in water and wipe off with a dry cloth or tissue.
- Do not hold the refractometer under a stream of water from a faucet. Do not splash it with or dip it in water.
- If the surface of the prism becomes coated with an oily solution or similar, it will repel test samples and affect readings. If this occurs, the prism should be cleaned with a weakened detergent or similar solvent.

VEE GEE Calibration

1. Calibration should be conducted at the start of each day or when any shifts in ambient temperature occur.
2. Open the daylight plate and apply one or two drops of distilled water on to the surface of the prism. Hold the prism at an angle close to parallel with the floor so the distilled water will not run off of the prism.
3. Gently close the daylight plate over the prism. The distilled water should spread as a thin, even layer in between the daylight plate and the prism. By looking through the daylight plate, ensure that the distilled water covers the ENTIRE surface of the prism. If there are bubbles and gaps or if the distilled water is only on one portion of the prism, the distilled water must be reapplied (Figure 1). Inaccurate calibrations will result if the prism is not covered correctly.
4. Looking through the eyepiece, hold the refractometer and direct the daylight plate upwards towards light. If the scale is not in focus, adjust it by gently turning the eyepiece (rubber hood) either clockwise or counterclockwise. Be careful not to overturn the focusing mechanism.
5. When the refractometer scale is viewed through the eyepiece, the upper field of view will be seen as blue and the lower field will be seen as white (Figure 2). Confirm that the boundary line crosses the scale at "0" (Figure 3).
6. If the boundary line falls above or below zero, gently loosen the set screw on the calibration ring. While looking through the eyepiece, gently turn the calibration ring clockwise or counterclockwise until the boundary line is at zero. Once this is achieved gently tighten down the set screw. (NOTE: Do not over-tighten. If the set screw is over-tightened, the boundary line may shift slightly).
7. When calibration is complete, gently wipe the prism using tissue paper.

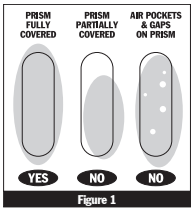
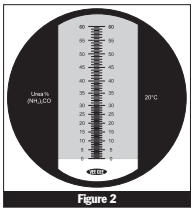


Figure 1


Figure 2

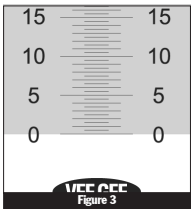
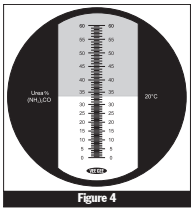


Figure 3

VEE GEE General Use

1. Open the daylight plate and apply one or two drops of the sample solution to the surface of the prism. Hold the prism at an angle close to parallel with the floor so the sample will not run off of the prism.
2. Gently close the daylight plate over the prism. The sample solution should spread as a thin, even layer in between the daylight plate and the prism. By looking through the daylight plate, ensure that the sample solution covers the ENTIRE surface of the prism. If there are bubbles and gaps or if the sample is only on one portion of the prism, the sample solution must be reapplied (Figure 1). Inaccurate readings will result if the prism is not covered correctly.
3. Looking through the eyepiece, hold the refractometer and direct the daylight plate upwards towards light. If the scale is not in focus, adjust it by gently turning the eyepiece (rubber hood) either clockwise or counterclockwise. Be careful not to overturn the focusing mechanism.
4. When the refractometer scale is viewed through the eyepiece, the upper field of view will be seen as blue and the lower field will be seen as white (Figure 4). The reading is taken at the point where the boundary line of the blue and white fields crosses the scale (Figure 5). The value is the Urea% reading of the sample.
5. When each measurement is complete, the sample must be cleaned from the prism using tissue paper and water.


Figure 4

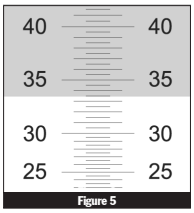


Figure 5

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