

BRIX DIGITAL REFRACTOMETER



How to Use a Misco TP Digital Refractometer to Measure Total Protein in Calves (Test for Passive Transfer)

1. COLLECT BLOOD SAMPLE

- Use a blood tube (see #2 below), 3 cc syringe w/20 G x 1" or vacutainer needle
- Draw 2 mL to 3 mL blood from jugular vein in calves from 2 to 5 days old
 - Restrain calf. Press thumb or finger in the groove of the neck at the base of the neck to stop the flow of blood

2. SEPARATE OUT SERUM

- Let blood sit at room temperature for 12 to 24 hours (use red top tube)
OR
- Spin blood in centrifuge for 10 minutes (use SST or red top tube)

3. TEST

- Recalibrate refractometer daily (see calibration directions on insert)
- Carefully remove stopper from blood tube
- With pipette or 3 cc syringe w/20 G x 1" needle, carefully draw up a small amount of serum (it may help to tip the tube) without disturbing the blood clot
- Need to press GO button to turn on
- Press menu button of the BRIX until you get the option: TPR g/dl [GO] to Set
- Place a few drops of serum with a pipette in the center well covering the entire eye
- Close the lid, press the GO button twice, and wait a few seconds before reading results
- NOTE: Wipe the center well between readings with distilled water and a Kim-Wipe

4. RESULTS

- > 7 = Calf may be dehydrated or testing procedure was flawed
- 6 to 7 = Calf absorbed sufficient antibodies OR may be slightly elevated due to scours or dehydration
- 5.5 to 6 = Adequate protection
- 5.0 to 5.4 = Some protection
- 4.5 to 4.9 = Inadequate
- < 4.5 = No colostrum, High Risk

5. GOALS

- 80% of total protein readings > 5.5 g/dL or 90% of total protein readings > 5.2 g/dL
- 60% of total protein readings > 6.0 to maximize calf health

6. ACTION PLAN IF LOW ANTIBODIES

- Place calf in clean environment to decrease bacterial exposure
- Mark calf/hutch as HIGH RISK so everyone is aware of increased concerns
- Consult your Armor veterinarian to review your colostrum management program and develop a Low TP Supplementation Protocol

*How to instructions for Misco Model #PA202X.

DETECT. DEFEND. DELIVER.