



serval

# ADVICE SHEET

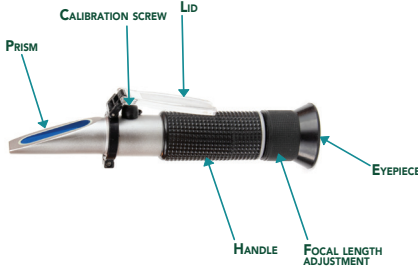
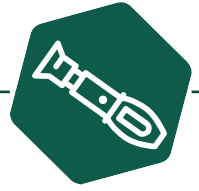
Colostrum Brix Urine  
Goat  
Refractometer  
Quality Density Grass Kid goat  
Milk powder  
Evaluation Immune Concentration  
Proteins  
Plasma

**TOOLS & DIAGNOSTICS (GOATS)**

**Using the refractometer**



# HOW IS A REFRACTOMETER USED?



THE DIFFERENT PARTS OF THE REFRACTOMETER

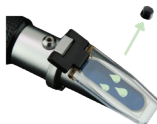
## METHOD FOR USING THE REFRACTOMETER

- 1** OPEN THE LID
- 2** CHECK THAT THERE IS NO DUST ON THE PRISM (OTHERWISE, IT MUST BE CLEANED WITH A SOFT CLOTH)
- 3** PLACE 2 TO 3 DROPS OF THE LIQUID SAMPLE ON THE PRISM
- 4** CLOSE THE LID SO THAT SUNLIGHT AND LIQUID WILL SPREAD OVER THE ENTIRE SURFACE WITH NO AIR BUBBLES OR DRY SPOTS
- 5** LEAVE THE LIQUID ON THE PRISM FOR ABOUT 30 SECONDS
- 6** POINT THE FRONT END OF THE REFRACTOMETER TOWARDS THE LIGHT AND LOOK INTO THE EYEPIECE TO READ THE RESULT
- 7** CLEAN THE PRISM AFTER USE



### DON'T FORGET TO CALIBRATE YOUR REFRACTOMETER WITH WATER

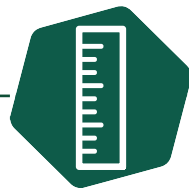
> REMOVE THE COVER FROM THE CALIBRATION SCREW



> ADJUST THE SCALE VALUE TO THE 0 LINE USING THE FOCAL LENGTH ADJUSTMENT



# WHAT CAN BE MEASURED WITH A REFRACTOMETER?



## COLOSTRUM QUALITY

Brix (%)	Density	IgG concentration equivalent (g/L)	Colostrum quality
< 15	< 1032	<b>0 - 28</b>	<b>VERY POOR</b>
15 TO 25	1032 - 1050	<b>25 -50</b>	<b>POOR</b>
25 TO 30	1050 - 1060	<b>50 -70</b>	<b>GOOD</b>
> 30	> 1060	<b>&gt; 70</b>	<b>VERY GOOD</b>



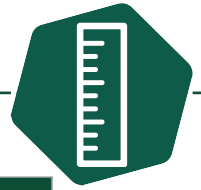
## IMMUNE TRANSFER EVALUATION

### PLASMA PROTEINS

Brix (%)	Serum proteins g/dl	Estimated transfer quality
< 4.5	< 4.5	<b>ABSENCE OF COLOSTRUM DRINKING</b>
4.5 - 4.9	4.5 - 4.9	<b>VERY INSUFFICIENT</b>
5 - 5.2	5 - 5.2	<b>INSUFFICIENT</b>
5.3 - 5.4	5.3 - 5.4	<b>AVERAGE</b>
5.5 - 7	5.5 - 7	<b>GOOD</b> between 6 and 7.5: good immune transfer and IgG level 13 g/L
> 7	> 7	<b>VERY GOOD</b>
<b>&gt; 7.5</b>	<b>&gt; 7.5</b>	<b>INFLAMMATION</b> sick kid goat (inspect the cord, joints and eyes)

TOOLS & DIAGNOSTICS (GOATS)

# WHAT CAN BE MEASURED WITH A REFRACTOMETER?



## URINE

### URINE DENSITY / URINE BRIX

BLOOD GLUCOSE	BRIX	PROTEINS	DENSITY
<b>BAD</b>	$\approx 0$ very clear urine is a sign of a serious disease		< 1015
<b>GOOD</b>	< 2 TO 3 %	< 1 %	1015 - 1030
<b>BAD</b>	> 4 % urine rich in sugars with a high Brix is a sign of intestinal digestion and a lack of watering highly concentrated urine may be associated with a water or Na K Cl deficiency	> 2 %	> 1030



## GRASS BRIX (%)

		MEDIOCRE	AVERAGE	GOOD
	MULTI-SPECIES MEADOWS	3 TO 5	6 TO 9	9 TO 14
	RYEGRASS	4	8	12
	CLOVER	4	8	14
	ALFALFA	4	8	16