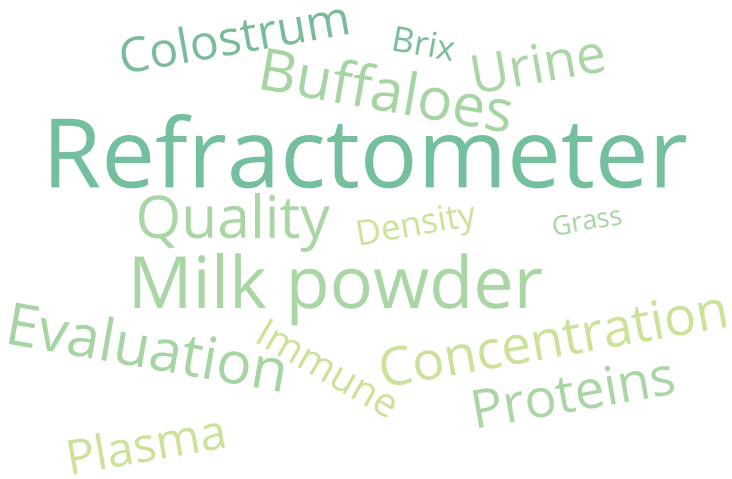
serval

ADVICE SHEET

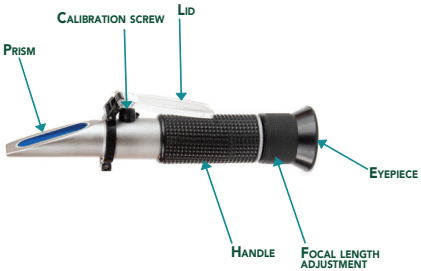


OUTILS & DIAGNOSTIC (BUFFALOES)

Using the refractometer

TOOLS & DIAGNOSTICS (BUFFALOES)

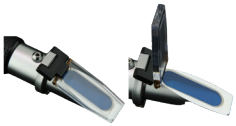
HOW IS A REFRACTOMETER USED?



The different parts of the refractometer

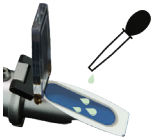
Method for using the refractometer

1 Open the lid

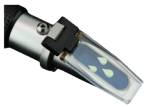


2 Check that there is no dust on the prism (otherwise, it must be cleaned with a soft cloth)

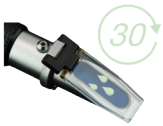
3 Place 2 to 3 drops of the liquid sample on the prism



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

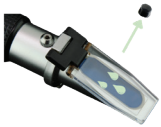


6 Point the front end of the refractometer towards the light and look into the eyepiece to read the result

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

TOOLS & DIAGNOSTICS (BUFFALOES)

WHAT CAN BE MEASURED WITH A REFRACTOMETER?

COLOSTRUM QUALITY

Brix (%)	IgG concentration equivalent (g/L)	Colostrum quality
< 17	0 - 25	VERY POOR
15 TO 23	25 - 50	POOR
24 TO 30	50 - 100	GOOD
> 30	> 100	VERY GOOD

IMMUNE TRANSFER EVALUATION

PLASMA PROTEINS

Brix (%)	Serum proteins g/dl	Estimated transfer quality
< 4.5	< 4.5	ABSENCE OF COLOSTRUM DRINKING
4.5 - 5.5	4.5 - 5.5	INSUFFICIENT
5.5 - 6.5	5 - 6.5	GOOD
> 6.5	> 6.5	VERY GOOD between 6.5 and 7.5: good immune transfer and IgG level 13 g/L
> 7.5	> 7.5	INFLAMMATION sick buffalo calf (inspect the cord, joints and eyes)

TOOLS & DIAGNOSTICS (BUFFALOES)

WHAT CAN BE MEASURED WITH A REFRACTOMETER?

URINE

URINE DENSITY / URINE BRIX

BLOOD GLUCOSE	BRIX	PROTEINS	DENSITY
BAD	≈ 0 very clear urine is a sign of a serious disease		< 1015
GOOD	< 2 TO 3 %	< 1 %	1015 - 1030
BAD	> 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

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