

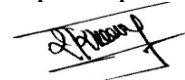
## TEST REPORT

Customer details	
Name of the Requestor	Vaishnavi Sinha
Address	Gopali Dairy and Farms Pvt. Ltd., Plot No.91, Kasna Ecotech 1, Ext 1, Gautam Buddha Nagar, Greater Noida-201308
Email ID	vaishnavisinha@gmail.com
Phone Number	9971927681
Sample details	
Date of receipt	18.02.2020
Date of reporting	29.02.2020
Report ID / Barcode	VETID180220I / GBL79909
Sample Label	Maharaj Bull
Sample type	Hair
Sample Condition	Suitable
Paste animal photo here	
Test details	
Test performed	<b>Milk Trait Genotyping in Cattles</b>
Method / Technique	SOP No. GTPL/PRO/9-11.
	Genomic DNA was isolated using DNA extraction method as per SOP No. GTPL/PRO/M-05. Desired genes were amplified using proprietary primers at their specific annealing temperature. Alpha-S1 genotyping was performed by Amplification Refractory Mutation System (ARMS) method. Genotyping for Beta-lactoglobulin and Kappa-casein was done by PCR-RFLP method.
Trait information	
<b>Alpha-S1:</b> Alpha S1 constitutes 39-46% of milk casein protein. Cows with the BB genotype produce a higher protein content than cows with the CC genotype. Alpha S1 genotype influences milk yield, fat yield, and protein yield for which genotype BB is found to be associated.	
<b>Beta-lactoglobulin:</b> Beta lactoglobulin has been gaining attention in the dairy industry due to its considerable effect on the percent of casein in protein through its effect on whey; less whey equals more casein. Cows with a BB genotype have about 3 percent higher total casein content within their total milk protein than cows with the genotype AA. AB.	
<b>Kappa Casein:</b> Cows with the BB genotype are genetically predisposed to produce a higher protein content than cows with the AA genotype. In addition, variant B has a positive effect on milk coagulation during cheesemaking.	

Results																							
Parameter	Genotypes	Milk Trait Score (MTS)*																					
Alpha S1	BB	2																					
Beta-Lactoglobulin	AB	1																					
Kappa-Casein	AA	0																					
		<b>TOTAL MTS = 3</b>																					
<p>MTS: Milk Trait Score (MTS) is cumulative sum of all value against each genotypes present in individual animal for the studied milk traits. The animal may have score in the range 0 – 6 with 0 being poorest MTS and 6 being the best MTS. Individually “BB” genotypes are considered as superior for a particular milk traits. For each B allele present in a trait, score =1 is attributed. Scale as below:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>MTS</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> </tr> </thead> <tbody> <tr> <td>Inferior</td> <td style="background-color: red;"></td> <td style="background-color: orange;"></td> <td style="background-color: yellow;"></td> <td style="background-color: lightgreen;"></td> <td style="background-color: green;"></td> <td style="background-color: darkgreen;"></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Superior</td> </tr> </tbody> </table>			MTS	1	2	3	4	5	6	Inferior													Superior
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						Superior																	

Disclaimer - This test is valid strictly for the sample submitted for analysis to geneOmbio Technologies Pvt. Ltd. The Report is applicable only for the sample tested and shall not be under any circumstances extrapolated to any other product(s) made out of this sample.

### Report Prepared by



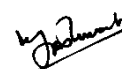
Sharad Pawar (Technical Manager)  
Biological Analysis

### Report Reviewed by



Suryakant Bangar (Chief Manager,  
Vetgene Services) Biological Analysis

### Report Authorized by



Dr. Yashwant Chavan  
( Technical Director) Biological Analysis

\*-End of the report-\*

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1. Test results related only to the sample (s) tested.
2. Test certificate in full or part shall not be reproduced unless written permission from geneOmbio Technologies Pvt Ltd.
3. geneOmbio Technologies Pvt Ltd. is not responsible for the authenticity of photocopied or computer scanned reports/certificates.
4. This inspection/testing have been performed to the best of our ability and our responsibility is limited to proven negligence. This certificate which is issued on conditions stipulated overleaf reflects our findings at the time and place of inspection/testing and does not relieve parties from their contractual obligations.
5. Samples will be retained by us for the period of 1 month only unless specific instructions to the contrary are received.
6. geneOmbio Technologies Pvt Ltd is not involved in sampling. Sampling was done at customer site.
7. The test activities were performed at permanent facility of geneOmbio Technologies Pvt Ltd.

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