



AGROTIS S.r.l.
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CERTIFICATO DI IDENTIFICAZIONE GENETICA/ GENETIC IDENTIFICATION CERTIFICATE

NOME SOGGETTO NAME		SPECIE SPECIE	BOVINE	RAZZA BREAD	MARCHIGIANA
MICROCHIP/MATRICOLA HERDBOOK N°/ID	IT041990092137	TATUAGGIO TATTOO		DATA NASCITA DATE OF BIRTH	
ROI/LOI/LIR		SESSO GENDER	M	GEMELLO MULTIPLE BIRTH	
PADRE SIRE	IT041990060620				
MADRE DAM	IT042990006338				
DIAGNOSI DIAGNOSIS	SIRE and DAM qualify				
CLIENTE/CUSTOMER	ANABIC, SS 317 – km 52,450, 06078 San Martino in colle (PG)				
RAPPORTO DI PROVA n. TEST REPORT n	19CA00982	DATA EMISSIONE DATE OF ISSUE	16/09/2019		
DATA RICEVIMENTO CAMPIONI DELIVERY DATE	15/11/2018	DATA INIZIO PROVA TEST START DATE	21/11/2018	DATA FINE PROVA TEST END DATE	20/12/2018
CODICE INTERNO LGS LGS SAMPLE ID	18BO68364	MATRICE DNA FROM	EARTAG		

<i>Metodo di prova: test method:</i>	Analisi molecolare tramite Illumina® beadchip/Molecular analysis with Illumina® beadchip
<i>Incertezza di misura: Uncertainty of measurement:</i>	
<i>Informazioni: Information:</i>	<i>La diagnosi del presente rapporto di prova è stata formulata tramite analisi del genotipo SNP attenendosi alle linee guida dell'International Society for Animal Genetics (ISAG) approvate alla conferenza di Cairns (Luglio 2012) e dell'International Committee for Animal Recording (ICAR). The diagnosis of the present test report has been made through SNP profile analysis following the guidelines of the International Society for Animal Genetics (ISAG) approved at Cairns conference (July, 2012) and by the International Committee for Animal Recording (ICAR).</i>
<i>Il prelievo ed il campionamento sono a carico del cliente / the customer is responsible for sampling</i>	
<i>Il presente rapporto riguarda soltanto i campioni sottoposti a prova e non può essere riprodotto in forma parziale, salvo approvazione scritta di LGS This report is relative to the analysed sample. Reproduction of partial copy of the document is not allowed without written authorization from LGS</i>	

IL RESPONSABILE DI LABORATORIO
THE LAB MANAGER

Dr. Raffaele Mazza



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GENOTIPO/GENOTYPE

Indice/Index	Nome Marker/Marker Name	AB Allele	TOP Allele
1	ARS-USMARC-Parent-AY761135-rs29003723	AB	AT
2	ARS-USMARC-Parent-AY776154-no-rs	BB	GG
3	ARS-USMARC-Parent-AY842472-rs29001941	AB	CG
4	ARS-USMARC-Parent-AY842473-rs29001956	AA	AA
5	ARS-USMARC-Parent-AY842474-rs29003226	BB	GG
6	ARS-USMARC-Parent-AY842475-rs29002127	AB	AG
7	ARS-USMARC-Parent-AY844963-rs17871338	AB	AG
8	ARS-USMARC-Parent-AY849381-rs29003287	AB	AG
9	ARS-USMARC-Parent-AY850194-no-rs	BB	GG
10	ARS-USMARC-Parent-AY851162-no-rs	AB	AG
11	ARS-USMARC-Parent-AY851163-rs17871661	AA	AA
12	ARS-USMARC-Parent-AY853302-no-rs	AB	AG
13	ARS-USMARC-Parent-AY853303-no-rs	AA	AA
14	ARS-USMARC-Parent-AY856094-rs17871190	AB	AG
15	ARS-USMARC-Parent-AY858890-rs29002256	AB	CG
16	ARS-USMARC-Parent-AY860426-no-rs	AB	AC
17	ARS-USMARC-Parent-AY863214-rs17871744	AB	AG
18	ARS-USMARC-Parent-AY914316-rs17871403	BB	CC
19	ARS-USMARC-Parent-AY916666-no-rs	AB	AG
20	ARS-USMARC-Parent-AY919868-rs29002211	BB	GG
21	ARS-USMARC-Parent-AY929334-no-rs	BB	GG
22	ARS-USMARC-Parent-AY937242-rs17872223	AA	AA
23	ARS-USMARC-Parent-AY939849-rs17870274	BB	GG
24	ARS-USMARC-Parent-AY941204-rs17872131	AB	AG
25	ARS-USMARC-Parent-AY943841-rs17871566	AB	AG
26	ARS-USMARC-Parent-DQ381152-rs29002408	AA	AA
27	ARS-USMARC-Parent-DQ381153-rs29012842	AB	AC
28	ARS-USMARC-Parent-DQ404149-no-rs	AB	AG
29	ARS-USMARC-Parent-DQ404150-rs29012530	AA	AA
30	ARS-USMARC-Parent-DQ404151-rs29019282	AB	AG
31	ARS-USMARC-Parent-DQ404152-rs29022245	AA	AA
32	ARS-USMARC-Parent-DQ404153-no-rs	AA	AA
33	ARS-USMARC-Parent-DQ435443-rs29010802	BB	CC
34	ARS-USMARC-Parent-DQ451555-rs29010795	BB	GG
35	ARS-USMARC-Parent-DQ468384-rs29003967	AA	AA
36	ARS-USMARC-Parent-DQ470475-no-rs	BB	TT
37	ARS-USMARC-Parent-DQ489377-rs29026932	AB	AG
38	ARS-USMARC-Parent-DQ500958-no-rs	BB	GG
39	ARS-USMARC-Parent-DQ647186-rs29014143	AB	AG



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40	ARS-USMARC-Parent-DQ647187-rs29010510	AB	AG
41	ARS-USMARC-Parent-DQ647189-rs29012226	AA	AA
42	ARS-USMARC-Parent-DQ647190-rs29013632	AB	AG
43	ARS-USMARC-Parent-DQ650635-rs29012174	BB	GG
44	ARS-USMARC-Parent-DQ650636-rs29024525	AB	AG
45	ARS-USMARC-Parent-DQ674265-rs29011266	AB	AG
46	ARS-USMARC-Parent-DQ786757-rs29019900	AB	AG
47	ARS-USMARC-Parent-DQ786758-rs29024430	AB	AC
48	ARS-USMARC-Parent-DQ786759-rs29026696	BB	GG
49	ARS-USMARC-Parent-DQ786761-rs29012840	AA	AA
50	ARS-USMARC-Parent-DQ786762-rs29010772	AB	AC
51	ARS-USMARC-Parent-DQ786763-rs29020472	AB	AT
52	ARS-USMARC-Parent-DQ786764-no-rs	AA	AA
53	ARS-USMARC-Parent-DQ786766-rs29012070	BB	GG
54	ARS-USMARC-Parent-DQ789028-rs29017713	AB	AG
55	ARS-USMARC-Parent-DQ837643-rs29018818	AB	AG
56	ARS-USMARC-Parent-DQ837644-rs29010468	BB	CC
57	ARS-USMARC-Parent-DQ837645-rs29015870	AA	AA
58	ARS-USMARC-Parent-DQ839235-rs29012691	AA	AA
59	ARS-USMARC-Parent-DQ846688-rs29023691	AA	AA
60	ARS-USMARC-Parent-DQ846690-no-rs	AA	AA
61	ARS-USMARC-Parent-DQ846691-rs29019814	BB	GG
62	ARS-USMARC-Parent-DQ846692-rs29010281	BB	GG
63	ARS-USMARC-Parent-DQ846693-rs29017621	AA	AA
64	ARS-USMARC-Parent-DQ866817-no-rs	BB	GG
65	ARS-USMARC-Parent-DQ866818-rs29011701	BB	CC
66	ARS-USMARC-Parent-DQ888309-rs29013741	AA	AA
67	ARS-USMARC-Parent-DQ888310-rs29012422	AB	AC
68	ARS-USMARC-Parent-DQ888311-rs29017313	AB	AC
69	ARS-USMARC-Parent-DQ888313-no-rs	BB	GG
70	ARS-USMARC-Parent-DQ916057-rs29009979	AB	AT
71	ARS-USMARC-Parent-DQ916058-rs29016146	AA	AA
72	ARS-USMARC-Parent-DQ916059-rs29009907	BB	GG
73	ARS-USMARC-Parent-DQ984825-rs29012457	BB	GG
74	ARS-USMARC-Parent-DQ984826-rs29027559	AB	AT
75	ARS-USMARC-Parent-DQ984827-rs29012019	AB	AG
76	ARS-USMARC-Parent-DQ990832-rs29015065	BB	GG
77	ARS-USMARC-Parent-DQ990833-rs29010147	BB	GG
78	ARS-USMARC-Parent-DQ990834-rs29013727	AA	AA
79	ARS-USMARC-Parent-DQ995976-no-rs	BB	GG
80	ARS-USMARC-Parent-DQ995977-rs29020834	BB	GG
81	ARS-USMARC-Parent-EF026084-rs29025380	AB	AG
82	ARS-USMARC-Parent-EF026086-rs29013660	BB	GG



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83	ARS-USMARC-Parent-EF026087-rs29011643	BB	GG
84	ARS-USMARC-Parent-EF028073-rs29014953	AB	AG
85	ARS-USMARC-Parent-EF034080-rs29024749	AA	AA
86	ARS-USMARC-Parent-EF034081-rs29009668	AB	AT
87	ARS-USMARC-Parent-EF034082-rs29013532	AA	AA
88	ARS-USMARC-Parent-EF034083-rs29018286	BB	CC
89	ARS-USMARC-Parent-EF034084-rs29016185	AB	CG
90	ARS-USMARC-Parent-EF034085-rs29025677	AB	AG
91	ARS-USMARC-Parent-EF034086-no-rs	AA	AA
92	ARS-USMARC-Parent-EF034087-no-rs	BB	GG
93	ARS-USMARC-Parent-EF042090-no-rs	BB	GG
94	ARS-USMARC-Parent-EF042091-rs29014974	BB	GG
95	ARS-USMARC-Parent-EF093509-rs29015170	AB	AT
96	ARS-USMARC-Parent-EF093511-rs29012316	AA	AA
97	ARS-USMARC-Parent-EF093512-rs29013546	BB	GG
98	ARS-USMARC-Parent-EF141102-rs29015783	AB	AG
99	ARS-USMARC-Parent-EF150946-rs29023666	AB	AG
100	ARS-USMARC-Parent-EF164803-rs29011141	AB	AG
101	ARS-BFGL-BAC-19454	AA	AA
102	ARS-BFGL-BAC-27364	AA	AA
103	ARS-BFGL-BAC-35552	AA	AA
104	ARS-BFGL-NGS-10035	BB	GG
105	ARS-BFGL-NGS-101456	BB	GG
106	ARS-BFGL-NGS-102169	AA	AA
107	ARS-BFGL-NGS-106015	AA	AA
108	ARS-BFGL-NGS-111053	AB	AG
109	ARS-BFGL-NGS-111076	BB	GG
110	ARS-BFGL-NGS-111114	AA	AA
111	ARS-BFGL-NGS-112094	AA	AA
112	ARS-BFGL-NGS-112325	BB	GG
113	ARS-BFGL-NGS-11383	AA	AA
114	ARS-BFGL-NGS-114006	AA	AA
115	ARS-BFGL-NGS-115514	BB	GG
116	ARS-BFGL-NGS-117319	AB	AG
117	ARS-BFGL-NGS-117322	AB	AG
118	ARS-BFGL-NGS-118319	AB	AC
119	ARS-BFGL-NGS-118340	AB	AC
120	ARS-BFGL-NGS-119662	BB	GG
121	ARS-BFGL-NGS-14740	BB	GG
122	ARS-BFGL-NGS-15506	BB	GG
123	ARS-BFGL-NGS-15731	AB	AG
124	ARS-BFGL-NGS-24419	BB	GG
125	ARS-BFGL-NGS-26517	AB	AG



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126	ARS-BFGL-NGS-27577	AB	AG
127	ARS-BFGL-NGS-31640	BB	GG
128	ARS-BFGL-NGS-31807	AB	AG
129	ARS-BFGL-NGS-36513	AB	AG
130	ARS-BFGL-NGS-38423	BB	GG
131	ARS-BFGL-NGS-38620	AB	AG
132	ARS-BFGL-NGS-39978	BB	GG
133	ARS-BFGL-NGS-42283	BB	GG
134	ARS-BFGL-NGS-42505	AB	AG
135	ARS-BFGL-NGS-55943	AB	AG
136	ARS-BFGL-NGS-57711	BB	GG
137	ARS-BFGL-NGS-58613	AA	AA
138	ARS-BFGL-NGS-67146	BB	GG
139	ARS-BFGL-NGS-70946	AA	AA
140	ARS-BFGL-NGS-72471	BB	CC
141	ARS-BFGL-NGS-76191	AA	AA
142	ARS-BFGL-NGS-76330	AA	AA
143	ARS-BFGL-NGS-86662	AB	AC
144	ARS-BFGL-NGS-93119	AB	AG
145	ARS-BFGL-NGS-96125	BB	GG
146	ARS-BFGL-NGS-99210	BB	GG
147	ARS-USMARC-569	AB	AG
148	ARS-USMARC-Parent-AY841151-rs29003466	BB	CC
149	ARS-USMARC-Parent-DQ786765-rs29009858	AA	AA
150	ARS-USMARC-Parent-EF026085-rs29021607	AB	AC
151	ARS-USMARC-Parent-EF089234-rs29020870	AA	AA
153	BTA-11701-rs29017459	AA	AA
154	BTA-30857-no-rs	AB	AG
155	BTA-37062-no-rs	BB	CC
156	BTA-73768-no-rs	AB	AG
157	BTA-92021-no-rs	AB	AT
158	BTB-00188171	AB	AG
159	BTB-00394801	AB	AC
160	BTB-00420215	AA	AA
161	BTB-00818821	BB	GG
162	BTB-01057979	BB	GG
163	BTB-01285245	BB	GG
164	BTB-01371672	BB	GG
165	BTB-01416427	BB	GG
166	BTB-01478115	AA	AA
167	BTB-01902778	AA	AA
168	BTB-01980499	BB	GG
169	Hapmap24215-BTA-163266	BB	CC



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170	Hapmap31098-BTA-136127	BB	GG
171	Hapmap34424-BES10_Contig566_926	BB	GG
172	Hapmap35535-SCAFFOLD86180_8791	AA	AA
173	Hapmap36588-SCAFFOLD90561_9460	BB	GG
174	Hapmap39425-BTA-70290	AB	AC
175	Hapmap39461-BTA-109898	AA	AA
176	Hapmap40148-BTA-92999	AA	AA
177	Hapmap40729-BTA-40319	AB	AG
178	Hapmap41591-BTA-59790	BB	GG
179	Hapmap42648-BTA-71195	AB	AG
180	Hapmap43057-BTA-80741	AA	AA
181	Hapmap43142-BTA-107561	AB	AG
182	Hapmap43792-BTA-122725	AA	AA
183	Hapmap43953-BTA-83292	AB	AG
184	Hapmap46550-BTA-103548	AA	AA
185	Hapmap46653-BTA-47447	AA	AA
186	Hapmap47281-BTA-40051	AB	AG
187	Hapmap49452-BTA-112834	AA	AA
188	Hapmap50598-BTA-122724	BB	GG
189	Hapmap51227-BTA-41809	BB	GG
190	Hapmap51527-BTA-97415	AA	AA
191	Hapmap51908-BTA-63031	AB	AG
192	Hapmap52240-rs29013844	BB	CC
193	Hapmap54020-rs29023153	AB	AG
194	Hapmap54313-rs29012632	BB	GG
195	Hapmap54547-rs29012198	AB	AG
196	Hapmap55441-rs29010990	BB	GG
197	Hapmap59876-rs29018046	BB	GG
198	Hapmap60017-rs29023471	BB	GG
199	UA-IFASA-5034	AA	AA
200	UA-IFASA-6532	AA	AA