

- AUTORIZADO CONSEJ. DE AGRICULTURA Y PESCA LABORATORIO PRIVADO A-120-AU
- LABORATORIO CONTROL COSMÉTICOS Y PRODUCTOS DE HIGIENE
- ENT. COLAB. CALIDAD AMBIENTAL ANDALUCÍA REC080
- INSCRITO REG. LAB. ENSAYOS Y ENTIDADES DE CONTROL DE CALIDAD DE LA CONSTR Y OBRA PÚBLICA DE ANDALUCÍA AND-L-108. ÁREAS: EA, EFA, EH, GT, PS, VS, OL-A, OL-B, OL-C, OL-D

**PELLETS DEL SUR**  
**AGRADE BIOMASA**

SAMPLE ID: Olive marc. Ref: 22/10/18. Delivered to laboratory.

PRESENTATION: Bag.

DATE: 22/10/18

STARTING ANALYSIS DATE: 24/10/18

END ANALYSIS DATE: 8/11/18

| PARAMETERS (test methodology)        | RESULTS | UNITS                 |
|--------------------------------------|---------|-----------------------|
| Moisture 105 °C (Gravimetry)         | 14,78   | % m/m                 |
| Ashes 550 °C (Gravimetry)            | 9,65    | % m/m <sub>seca</sub> |
| Apparent density (Gravimetry)        | 0,642   | g/cc                  |
| Chlorides (Volumetry)                | 0,59    | % m/m <sub>seca</sub> |
| <b>CALORIFIC VALUE</b> (Calorimetry) |         |                       |
| High calorific value dry basis       | 4821    | cal/g                 |
| High calorific value wet basis       | 4108    | cal/g                 |
| Low calorific value dry basis        | 4437    | cal/g                 |
| Low calorific value wet basis        | 3782    | cal/g                 |

| PARAMETERS (test methodology)                                   | RESULTS | UNITS |
|---|---------|-------|
| <b>ASH MELTING BEHAVIOUR</b> (Extern. Based on CENT/TS 15370-1) |         |       |
| Initial deformation temperature                                 | 1327    | ° C   |
| Softening temperature   | 1350    | ° C   |
| Hemispheric temperature   | 1368    | ° C   |
| Melting temperature   | 1400    | ° C   |

Observations: Estimated Hydrogen for Low calorific value calcule = 5,85 %.

Lucena, 16<sup>th</sup> november 2.018

DIGITAL SIGNATURE: Technical Manager

**Laboratorio TCAL, S.L.**  
 C.I.F.: B - 14.469.985  
 Teléfono.: 957 515 197  
 Dir. Postal: C/ Mesón, 25 - 2º  
 Dir. Laboratorio: C/ Los Mármoles, 5  
 14.900 - LUCENA (Córdoba)

The results correspond to the tested sample. Sample unofficial "analysis without official recognition".  
 This report may not be reproduced except in full, without written permission from the issuer.  
 The uncertainty of results, where applicable, is available to the petitioner.  
 "Ref.": data given by the petitioner.