



**Report of Analytical Service**

**Title**

Technical Assistance for the determination of the chemical composition of one sample identified as "ferrous material"

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**Client**

José Mustafá

Industria de Transformación Ferrosa, C.A.

ITF-Z15-01

**Date**

Diciembre, 2015

**Approved by:**

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Anix Díaz  
Technical Leader

**Received by:**

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Signature and date

**REPORT OF ANALYTICAL SERVICE**

ANALYTICAL SERVICE N° GTSA-179, 2015

<b>Company</b>	Industria de Transformación de Ferrosa C. A..	<b>Date:</b>	28of December, 2015
<b>Client</b>	Jose Mustafá		
<b>Department</b>	Industrias de Transformación Ferrosa, C A.		
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<b>Offer N°</b>	ITF-Z14-01		
<b>Activity</b>	Technical Assistance for the determination of the chemical composition of one sample identified as "ferrous material"		

**Description of the Analytical Service****1. OBJECTIVES**

To provide the analytical service for determination of the chemical composition of one sample identified as "ferrous material".

**2. METHODOLOGY**

In Table 1 the testing methods on the analysis performed on the sample of "ferrous material" delivered to our laboratory are indicated.

**Table 1.** Analysis Methods

Parameters	Methods
Sample preparation for metal analysis	Digestion and fusion norm ISO 2598
Silicon	ISO 2598
Carbon content by LECO	ISO 9686
Sulphur content by LECO	ISO 9686
Determination of Fe, Al, Ca, Mg, Ni, Cr, V, K, Mn, P y Ti by Inductively Coupled Plasma (ICP). .	SMWW 3120 / COVENIN 3566 / ASTM D 1976



### 3. RESULTS

In Figure 1, a photograph of the analyzed material is showed. For its chemical analysis, a random sampling was performed using a drill to obtain a pulverized sample representative of all the pieces. In the photograph we show one of the sample specimens.

In Table 2 the results of the chemical characteristics of the ferrous material sample as total elements is presented for the grounded sample.



**Figure 1.** Photograph of the ferrous material

**Table 2.** Chemical characterization of the ferrous sample by total elements" grounded.

Parameter	Results	Units
Fe	96.8	% p/p
Al	0.60	% p/p
Mn	0.19	% p/p
P	0.08	% p/p
Ca	1.47	% p/p
Mg	0.35	% p/p
V	<0.001	% p/p
Si	0.29	% p/p
Ti	<0.001	% p/p
K	<0.001	% p/p
Cr	0.006	% p/p
Ni	<0.001	% p/p
Sulphur content, S	<0.01	% p/p

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