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| **DRY MATTER** | **MS45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DRY MATTER | % w/w | MS45 | 23.8 | 23.8 | 0.1 | 0.5 | 26 | 22.8 | 24.8 | 0 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **ORGANIC MATTER (by loss on ignition)** | **MO45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ORGANIC MATTER (by loss on ignition) | % w/w | MO45 | 19.04 | 19.56 | 0.14 | 0.53 | 22 | 18.5 | 20.62 | -0.98 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **pH** | **pH45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| pH |  | pH45 | 8.77 | 8.64 | 0.04 | 0.16 | 24 | 8.32 | 8.96 | 0.81 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **N-AMMONIACAL NITROGEN** | **NNH4 45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| N-AMMONIACAL NITROGEN | % w/w | NNH4 45 | 0.3515 | 0.3438 | 0.028 | 0.0897 | 16 | 0.1719 | 0.5157 | 0.09 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **TOTAL NITROGEN** | **NTOT45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TOTAL NITROGEN | % w/w | NTOT45 | 0.579 | 0.884 | 0.079 | 0.312 | 24 |  |  |  |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es menor al límite de detección |

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| **Total carbon** | **CT45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total carbon | % | CT45 | 11.04 | 10.86 | 0.24 | 0.47 | 6 | 9.92 | 11.8 | 0.38 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **PHOSPHORUS (in P2O5)** | **P2O5 45(2)** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PHOSPHORUS (in P2O5) | % w/w | P2O5 45(2) | 0.506 | 0.611 | 0.026 | 0.094 | 21 | 0.489 | 0.733 | -1.72 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **POTASSIUM (in K2O)** | **K2O 45(2)** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| POTASSIUM (in K2O) | % w/w | K2O 45(2) | 0.361 | 0.417 | 0.015 | 0.054 | 20 | 0.313 | 0.521 | -1.08 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **CALCIUM (in CaO)** | **CaO 45(2)** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CALCIUM (in CaO) | % w/w | CaO 45(2) | 0.979 | 1.246 | 0.052 | 0.183 | 19 | 0.934 | 1.558 | -1.71 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **MAGNESIUM (in MgO)** | **MgO 45(2)** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MAGNESIUM (in MgO) | % w/w | MgO 45(2) | 0.974 | 0.133 | 0.007 | 0.024 | 20 | 0.106 | 0.16 | 62.3 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | ERRONEO |

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| **SODIUM (in Na2O)** | **Na 45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SODIUM (in Na2O) | % w/w | Na 45 | 0.196 | 0.218 | 0.0053 | 0.0181 | 18 | 0.1818 | 0.2542 | -1.22 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **SULPHUR (in SO3)** | **SO3 45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SULPHUR (in SO3) | % w/w | SO3 45 | 1.198 | 0.241 | 0.012 | 0.037 | 16 | 0.167 | 0.315 | 25.86 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | ERRONEO |

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| **COPPER** | **Cu 45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| COPPER | mg.kg-1 | Cu 45 | 4.35 | 5.3 | 0.22 | 0.83 | 22 | 3.64 | 6.96 | -1.14 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **ZINC** | **Zn 45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ZINC | mg.kg-1 | Zn 45 | 10.5 | 15.5 | 0.4 | 1.5 | 21 | 12.5 | 18.5 | -3.33 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | ERRONEO |

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| **IRON** | **Fe 45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IRON | % w/w | Fe 45 | 0.086 | 0.105 | 0.004 | 0.015 | 19 | 0.075 | 0.135 | -1.27 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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| **MANGANESE** | **Mn 45** |

| **Parámetro** | **Unidad** | **Código** | **x** | **xpt** | **u(xpt)** | **s(xpt)** | **p(xpt)** | **Min** | **Max** | **z-score** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MANGANESE | mg.kg-1 | Mn 45 | 64.7 | 74.3 | 2.5 | 8.8 | 19 | 56.7 | 91.9 | -1.09 |
| x=valor del laboratorio, xpt=valor asignado, u(xpt)=incertidumbre xpt, s(xpt)= desviación estándar robusta de los resultados, p(xpt)= número de resultados, Min= tolerancia inferior, Max=tolerancia superior, z-score= z-score. | | | | | | | | | | |

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| El resultado es | CORRECTO |

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## Informe generado automáticamente utilizando el software RStudio, el archivo de R Markdown BIPEA-AUTOMATICO.Rmd y el archivo de datos obtenido de www.BIPEA.org export\_criteres.xlsx del mes correspondiente.

## Programado por David V.

### REVISADO

08 de marzo de 2023