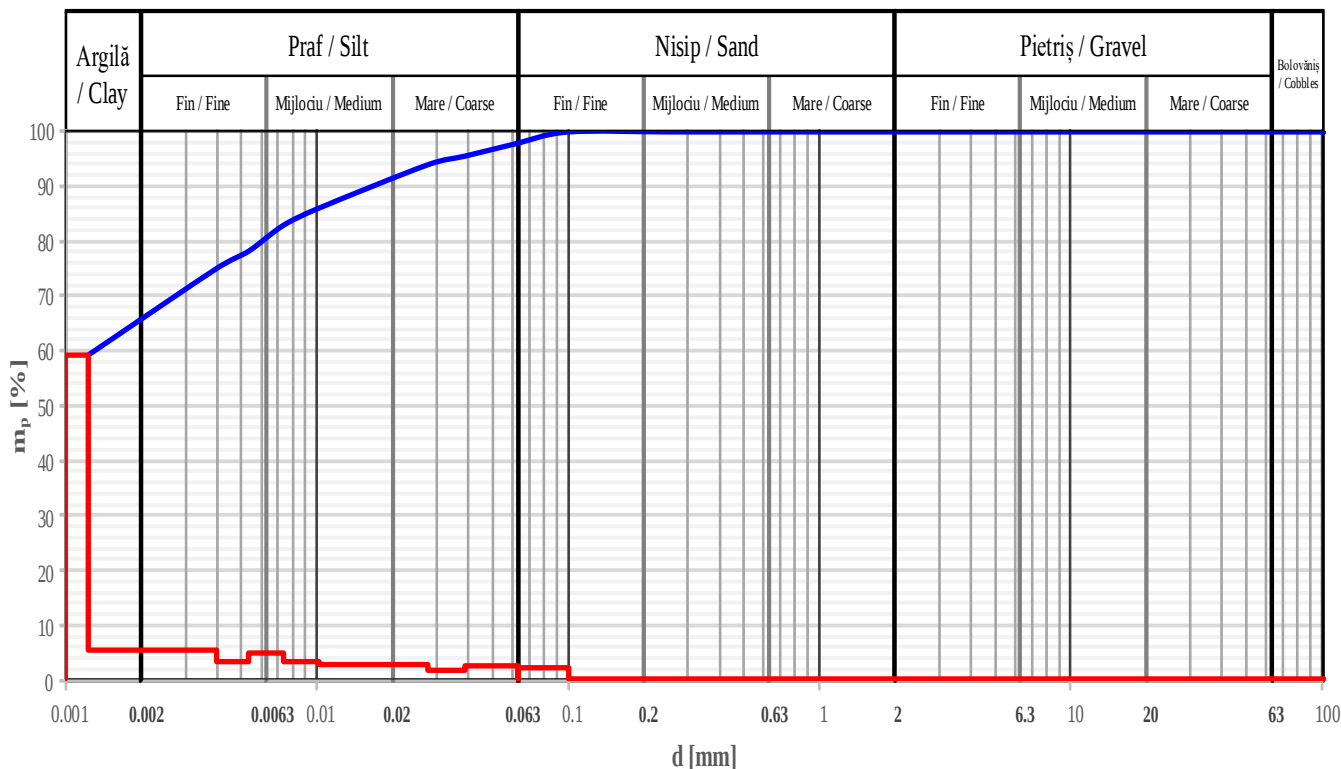


DCC-GEO-TEST CONSULT S.R.L.  
 LABORATOR DE ANALIZE ȘI ÎNCERCĂRI  
 ÎN CONSTRUCȚII - GRAD II  
 Autorizație nr. 2940 din 15.08.2014/24.08.2018

Amplasament / Location: Reabilitarea liniei de cale ferata Roman – Iasi - Frontiera  
 Forajul/Borehole: FTS 64b  
 Proba/Sample: PT 6  
 Adancimea/Depth(m): 6,00

Raport de incercare nr. / Test report no.75 1226



Curba granulometrica / Granulometric curve

| Identificarea și clasificarea pământurilor SR EN ISO 14688/2-2018 / SR EN ISO 14688/2-2018 / STAS 1913/5-85 |                   |            |            |            |                         |            |              |             |            |                |                                     |
|-------------------------------------------------------------------------------------------------------------|-------------------|------------|------------|------------|-------------------------|------------|--------------|-------------|------------|----------------|-------------------------------------|
| Argila / Clay (CI) cenusie-galbuie Un = #N/A                                                                |                   |            |            |            |                         |            |              |             |            |                |                                     |
| Conform SR EN ISO 14688/2-2005, la cerința beneficiarului                                                   | Pământ fin / Fine |            |            |            | Pământ grosier / Coarse |            |              |             |            |                | Pământ foarte grosier / Very coarse |
| Argila (CI)                                                                                                 | Praf (Si)         |            |            | Nisip (Sa) |                         |            | Pietris (Gr) |             |            | Bolovanis (Co) |                                     |
|                                                                                                             | Fin (fSi)         | Mediu (mS) | Mare (cSi) | Fin (fSa)  | Mediu (mSa)             | Mare (cSa) | Fin (fGr)    | Mediu (mGr) | Mare (cGr) |                |                                     |
|                                                                                                             | 64                | 34         |            | 2          |                         |            | 0            |             |            | 0              |                                     |
|                                                                                                             | < 0,002           | < 0,0063   | < 0,02     | < 0,063    | < 0,2                   | < 0,63     | < 2          | < 6,3       | < 20       | < 63           | < 200mm                             |
| %                                                                                                           | 64                | 16         | 11         | 7          | 2                       | 0          | 0            | 0           | 0          | 0              | 0                                   |

CLASIFICAREA PĂMÂNTURILOR /SR Pământ fin / Fine soil  
 EN ISO 14688/2-2018 / SR EN ISO 14688/2-2018 #N/A

Executat de / Performed by:  
 ing. Nina IOSIF

*Nina IOSIF*

Sef Laborator / Laboratory head: Constanta ANDREI

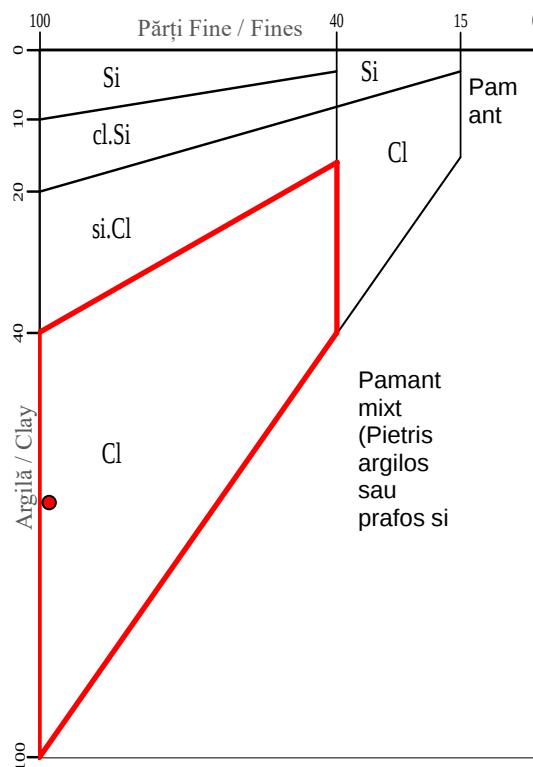
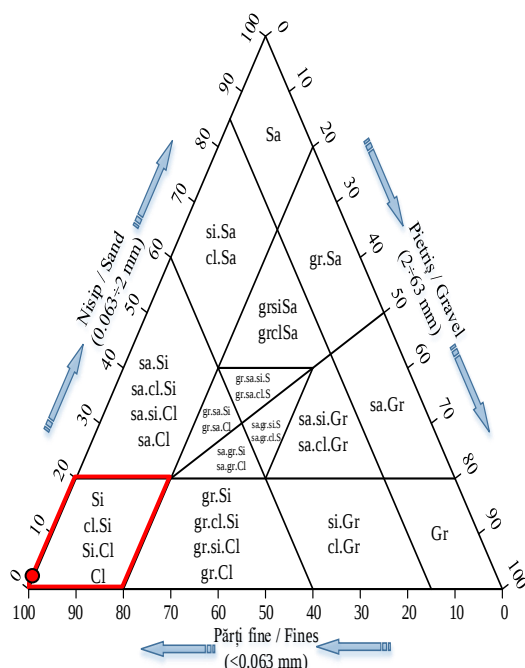


Data / Date: 14.01.2021

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|             | d (mm) | mp (%) |
|-------------|--------|--------|
| CERNERE     | 100    | 100,0  |
|             | 100    | 100,0  |
|             | 100    | 100,0  |
|             | 100    | 100,0  |
|             | 100    | 100,0  |
|             | 100    | 100,0  |
|             | 90     | 100,0  |
|             | 63     | 100,0  |
|             | 45     | 100,0  |
|             | 31,5   | 100,0  |
|             | 22,4   | 100,0  |
|             | 16     | 100,0  |
|             | 11,2   | 100,0  |
|             | 5,6    | 100,0  |
|             | 3,15   | 100,0  |
| SEDIMENTARE | 2      | 100,0  |
|             | 0,5    | 100,0  |
|             | 0,25   | 100,0  |
|             | 0,10   | 100,0  |
|             | 0,063  | 98,0   |
|             | 0,063  | 97,96  |
|             | 0,039  | 95,57  |
|             | 0,028  | 93,99  |
|             | 0,020  | 91,35  |
|             | 0,014  | 88,72  |
|             | 0,010  | 86,08  |
|             | 0,007  | 82,92  |
|             | 0,005  | 78,17  |
|             | 0,004  | 75,01  |
|             | 0,003  | 69,74  |
|             | 0,002  | 64,47  |
|             | 0,001  | 59,20  |



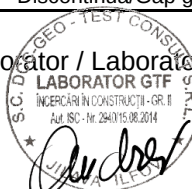
**Clasificarea pamantului dupa SR EN ISO 14688-1:2018 / SR EN ISO 14688-2:2018**

| Tip pamant / Soil group             | Tip fractiune |    | %  | C <sub>u</sub> (Un) | C <sub>c</sub> | Forma curbei granulometrice / Shape of grading curve | C <sub>u</sub> (Un) | C <sub>c</sub> |
|-------------------------------------|---------------|----|----|---------------------|----------------|------------------------------------------------------|---------------------|----------------|
| Pamant fin / Fine                   | Argila        | Cl | 64 | <3                  | < 1            | Foarte uniforma / Very uniform                       | #N/A                | #####          |
|                                     | Praf          | Si | 34 |                     |                |                                                      |                     |                |
| Pamant grosier / Coarse             | Nisip         | Sa | 2  | 3---6               | < 1            | Uniforma / Uniform                                   | #N/A                | #####          |
|                                     | Pietris       | Gr | 0  | 6---15              | < 1            | Uniformitate medie / Medium uniformity               |                     |                |
| Pamant foarte grosier / Very coarse | Bolovanis     | Co |    | >15                 | 1---3          | Neuniforma / Non-uniform                             | #N/A                | #####          |
|                                     |               |    |    | >15                 | <0,5           | Discontinua / Gap graded                             |                     |                |

Executat de / Performed by :  
 ing. Nina IOSIF

*Nina IOSIF*

Sef Laborator / Laboratory head: Constanta ANDREI



COD PROBA 75 1226

Raport de incercare nr. / Test report no.75 1227

**DETERMINAREA LIMITELOR DE PLASTICITATE /  
DETERMINATION OF ATTEBERG LIMITS  
STAS 1913/4-86**

| Nr. de caderi ale cupei (N)                 | 25 | UMIDITATE NATURALA<br>NATURAL MOISTURE<br>STAS 1913/1-82 |  |  | LIMITA DE CURGERE<br>LIQUID LIMIT<br>W <sub>L</sub> % |       |       |       | LIMITA DE FRAMANTARE<br>PLASTIC LIMIT<br>W <sub>P</sub> % |       |       |
|---------------------------------------------|----|----------------------------------------------------------|--|--|-------------------------------------------------------|-------|-------|-------|-----------------------------------------------------------|-------|-------|
| Adancimea de patrundere a<br>conului (S) mm | 10 |                                                          |  |  | Metoda cu cupa                                        |       |       |       |                                                           |       |       |
|                                             |    |                                                          |  |  | 44                                                    | 33    | 22    | 15    |                                                           |       |       |
| PROBA UMEDA + TARA A (gr)                   |    | 150,00                                                   |  |  | 33,39                                                 | 35,33 | 33,39 | 35,97 | 19,59                                                     | 19,76 | 20,40 |
| PROBA USCATA + TARA B (gr)                  |    | 106,23                                                   |  |  | 24,62                                                 | 26,01 | 24,70 | 26,38 | 18,66                                                     | 18,78 | 19,34 |
| TARA C (gr)                                 |    |                                                          |  |  | 13,38                                                 | 14,40 | 14,16 | 14,97 | 14,83                                                     | 14,72 | 15,00 |
| A - B                                       |    | 43,77                                                    |  |  | 8,77                                                  | 9,32  | 8,69  | 9,59  | 0,92                                                      | 0,97  | 1,05  |
| B - C                                       |    | 106,23                                                   |  |  | 11,24                                                 | 11,61 | 10,54 | 11,41 | 3,84                                                      | 4,07  | 4,35  |
| W(%) = (A-B)/(B-C)*100                      |    | 41,20                                                    |  |  | 78,01                                                 | 80,22 | 82,43 | 84,04 | 24,00                                                     | 23,89 | 24,21 |
| W(%) MEDIU                                  |    | 41,20                                                    |  |  | 81,83                                                 |       |       |       | 24,04                                                     |       |       |

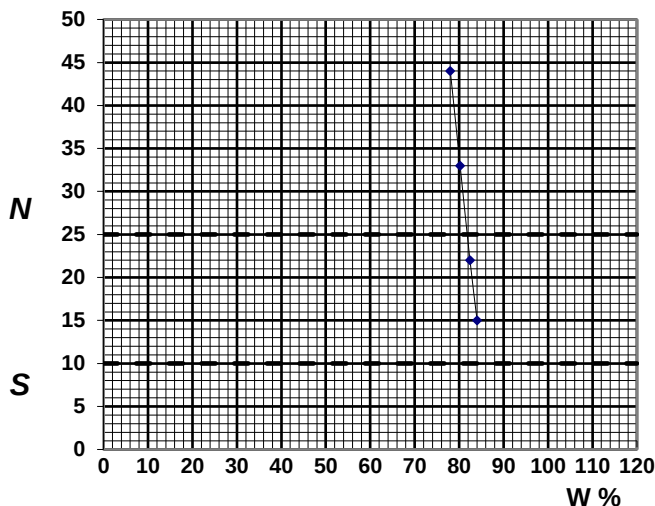
DESCRIEREA PROBEI /  
DESCRIPTION OF THE SOIL:

Argila cenusie-galbuie plastic consistenta / firm  
consistency

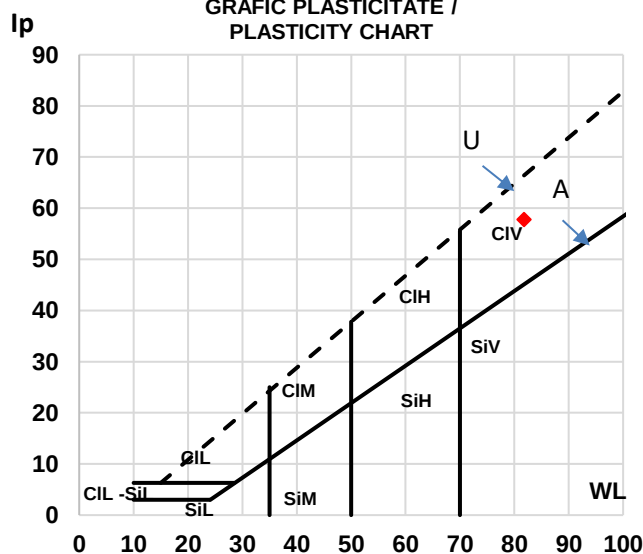
SR EN ISO 14688/1/2-2018 Pamant fin cu plasticitate foarte mare / Fine soil, very high plasticity

CIV

GRAFICUL LIMITEI SUPERIOARE DE PLASTICITATE  
UPPER LIMIT OF PLASTICITY CHART



GRAFIC PLASTICITATE /  
PLASTICITY CHART



|                                              |                                                            |       |   |  | SR EN ISO 14688/2-2018       |                              |                                     |
|----------------------------------------------|------------------------------------------------------------|-------|---|--|------------------------------|------------------------------|-------------------------------------|
| LIMITA DE FRAMANTARE /<br>PLASTIC LIMIT      | W <sub>P</sub> =                                           | 24,04 | % |  | Tip pamant /<br>Type of Soil | Plasticitate /<br>Plasticity | Limita de curgere /<br>Liquid limit |
| UMIDIT. NATUR. / NATURAL MOISTURE            | W =                                                        | 41,20 | % |  | Cl Clay                      | Low redusa                   | <35                                 |
| LIMITA DE CURGERE / LIQUID LIMIT             | W <sub>L</sub> =                                           | 81,83 | % |  | Si Silt                      | Medium medie                 | 35----50                            |
| INDICE DE PLASTICIT./PLASTICITY INDEX        | I <sub>P</sub> =W <sub>L</sub> -W <sub>P</sub>             | 57,79 | % |  |                              | Heigh mare                   | 50----70                            |
| INDICE DE CONSISTENȚĂ /<br>CONSISTENCY INDEX | I <sub>C</sub> = (W <sub>L</sub> -<br>W) / I <sub>P</sub>  | 0,70  |   |  |                              | Very<br>heigh mare           | >70                                 |
| INDICE DE LICHIDITATE/<br>LIQUIDITY INDEX    | I <sub>L</sub> = (W -<br>W <sub>P</sub> ) / I <sub>P</sub> | 0,30  |   |  |                              | O organig                    |                                     |

Executat de / Performed by: Laborant Emilia Dumitru

Data / Date: 14.01.2021

COD PROBA 75

1227

Sef Laborator / Laboratory head: Constanta ANDREI

