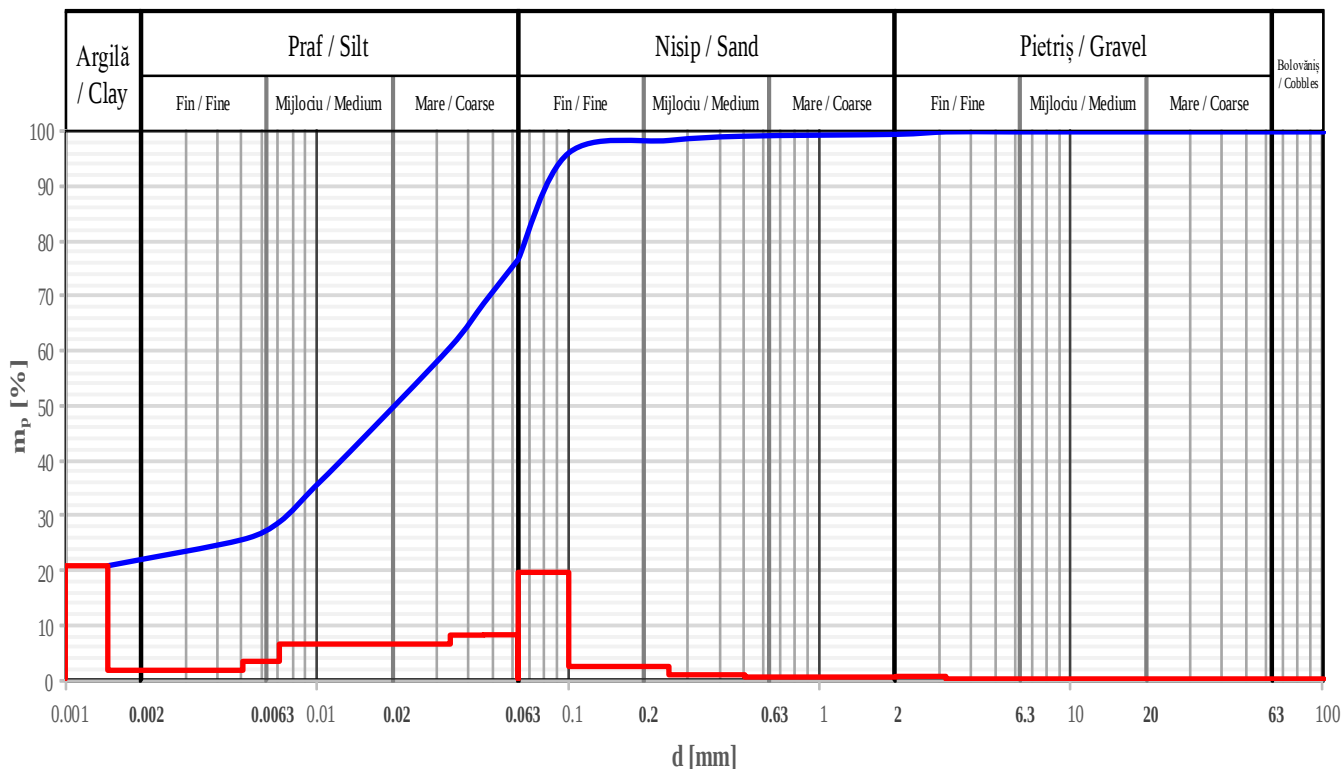


DCC-GEO-TEST CONSULT S.R.L.  
 LABORATOR DE ANALIZE ȘI ÎNCERCĂRI  
 ÎN CONSTRUCȚII - GRAD II  
 Autorizație nr. 2940 din 15.08.2014/24.08.2018

Amplasament / Location: Reabilitarea liniei de cale ferata Roman – Iasi - Frontiera  
 Forajul/Borehole: FTS 76  
 Proba/Sample: PT 6  
 Adancimea/Depth(m): 6,00

Raport de incercare nr. / Test report no. 75 1043



Curba granulometrica / Granulometric curve

|                                                                                                                |                   |           |            |            |                         |             |            |              |             |            |                   |                                                            |                                           |  |  |                 |  |      |      |
|----------------------------------------------------------------------------------------------------------------|-------------------|-----------|------------|------------|-------------------------|-------------|------------|--------------|-------------|------------|-------------------|------------------------------------------------------------|-------------------------------------------|--|--|-----------------|--|------|------|
| Identificarea si clasificarea pamanturilor SR<br>EN ISO 14688/2-2018 / SR EN ISO 14688/2-2018 / STAS 1913/5-85 |                   |           |            |            |                         |             |            |              |             |            |                   | Argila prafoasa nisipoasa / Sandy silty clay<br>(sa.si.CI) |                                           |  |  | cenusie-galbuie |  | Un = | #N/A |
| Conform<br>SR EN ISO<br>14688/2-<br>2005, la<br>cerinta<br>beneficiar<br>ului                                  | Pamant fin / Fine |           |            |            | Pamant grosier / Coarse |             |            |              |             |            |                   |                                                            | Pamant<br>foarte grosier<br>/ Very coarse |  |  |                 |  |      |      |
|                                                                                                                | Argila<br>(CI)    | Praf (Si) |            |            | Nisip (Sa)              |             |            | Pietris (Gr) |             |            | Bolovanis<br>(Co) |                                                            |                                           |  |  |                 |  |      |      |
|                                                                                                                |                   | Fin (fSi) | Mediu (mS) | Mare (cSi) | Fin (fSa)               | Mediu (mSa) | Mare (cSa) | Fin (fGr)    | Mediu (mGr) | Mare (cGr) |                   |                                                            |                                           |  |  |                 |  |      |      |
|                                                                                                                | 21                | 56        |            |            | 23                      |             |            | 0            |             |            | 0                 |                                                            |                                           |  |  |                 |  |      |      |
|                                                                                                                | < 0,002           | < 0,0063  | < 0,02     | < 0,063    | < 0,2                   | < 0,63      | < 2        | < 6,3        | < 20        | < 63       | < 200mm           |                                                            |                                           |  |  |                 |  |      |      |
| %                                                                                                              | 21                | 6         | 23         | 27         | 21                      | 1           | 1          | 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

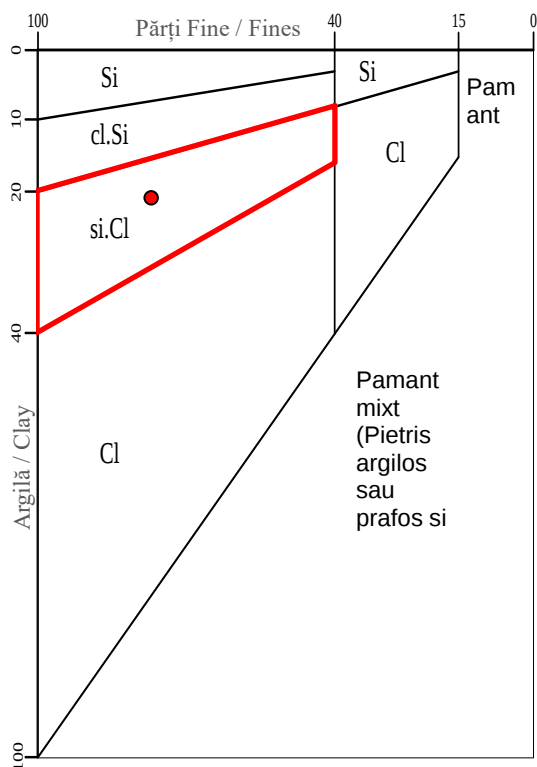
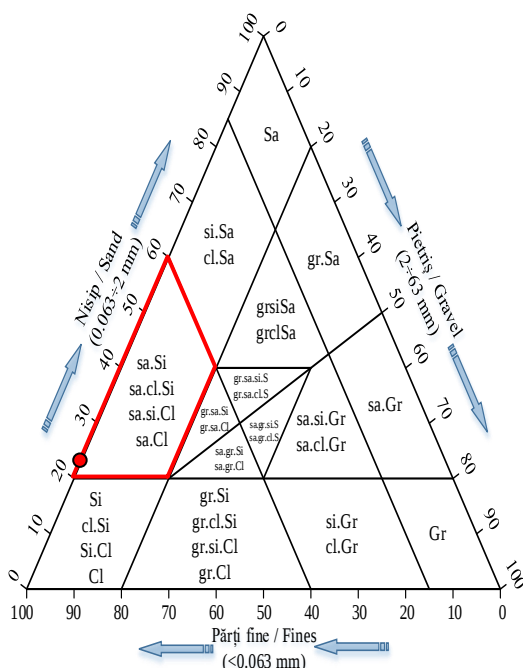


Data / Date: 17.12.2020

COD PROBA 75 1043

**Raport de incercare nr. / Test report no. 75 1043**

|             | 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  |
| SEDIMENTARE | 3,15   | 100,0  |
|             | 2      | 99,6   |
|             | 0,5    | 99,2   |
|             | 0,25   | 98,4   |
|             | 0,10   | 96,2   |
|             | 0,063  | 76,7   |
|             | 0,063  | 76,70  |
|             | 0,046  | 68,65  |
|             | 0,034  | 60,66  |
|             | 0,025  | 54,26  |
|             | 0,018  | 47,87  |
|             | 0,013  | 41,47  |
|             | 0,010  | 35,08  |
|             | 0,007  | 28,68  |
|             | 0,005  | 25,48  |
|             | 0,004  | 23,89  |
|             | 0,003  | 22,29  |
|             | 0,001  | 20,69  |



**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 | 21 | <3                  | < 1            | Foarte uniforma / Very uniform                       | #N/A                | #####          |
|                                     | Praf          | Si | 56 |                     |                | Uniforma / Uniform                                   |                     |                |
| Pamant grosier / Coarse             | Nisip         | Sa | 23 | 3---6               | < 1            | Uniformitate medie / Medium uniformity               |                     |                |
|                                     | Pietris       | Gr | 0  | 6---15              | < 1            | Neuniforma / Non-uniform                             |                     |                |
| Pamant foarte grosier / Very coarse | Bolovanis     | Co |    | >15                 | 1---3          | Discontinua / Gap graded                             |                     |                |
|                                     |               |    |    | >15                 | <0,5           |                                                      |                     |                |

Executat de / Performed by :  
 ing. Nina IOSIF

*Nina IOSIF*

Sef Laborator / Laboratory head: Constanta ANDREI



COD PROBA 75 1043

Raport de incercare nr. / Test report no. 75 1044

**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                                        |       |       |       |                                                           |       |       |
|                                             |    |                                                          |  |  | 42                                                    | 31    | 22    | 14    |                                                           |       |       |
| PROBA UMEDA + TARA A (gr)                   |    | 150,00                                                   |  |  | 26,48                                                 | 28,33 | 26,91 | 29,17 | 17,57                                                     | 17,71 | 18,33 |
| PROBA USCATA + TARA B (gr)                  |    | 119,36                                                   |  |  | 22,85                                                 | 24,24 | 22,93 | 24,61 | 17,03                                                     | 17,15 | 17,71 |
| TARA C (gr)                                 |    |                                                          |  |  | 11,81                                                 | 12,83 | 12,59 | 13,40 | 13,26                                                     | 13,15 | 13,43 |
| A - B                                       |    | 30,64                                                    |  |  | 3,63                                                  | 4,09  | 3,98  | 4,56  | 0,54                                                      | 0,57  | 0,62  |
| B - C                                       |    | 119,36                                                   |  |  | 11,04                                                 | 11,41 | 10,34 | 11,21 | 3,77                                                      | 4,00  | 4,28  |
| W(%) = (A-B)/(B-C)*100                      |    | 25,67                                                    |  |  | 32,90                                                 | 35,83 | 38,46 | 40,64 | 14,28                                                     | 14,14 | 14,51 |
| W(%) MEDIU                                  |    | 25,67                                                    |  |  | 37,58                                                 |       |       |       | 14,31                                                     |       |       |

DESCRIEREA PROBEI /  
DESCRIPTION OF THE SOIL:

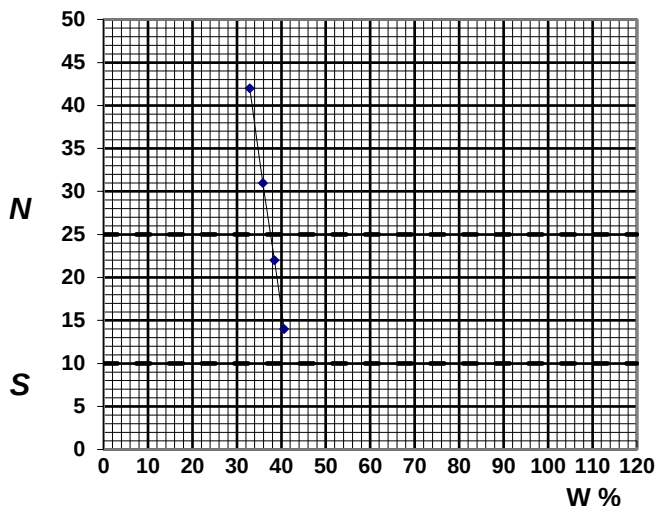
Praf argilos cenușiu-galbui cu FeO plastic consistent / firm  
consistency

SR EN ISO 14688/1/2-2018

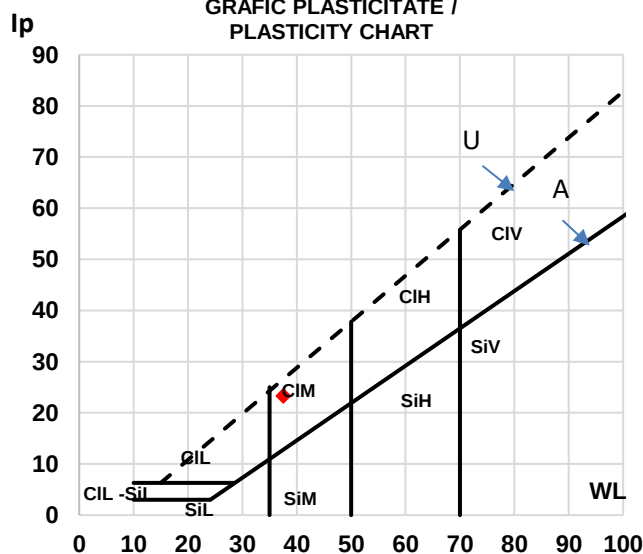
Pământ fin cu plasticitate medie / Fine soil, medium plasticity

CIM

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> =                                           | 14,31 | % | Tip pământ /<br>Type of Soil | Plasticitate /<br>Plasticity | Limita de curgere /<br>Liquid limit |          |
| UMIDIT. NATUR. / NATURAL MOISTURE            | W =                                                        | 25,67 | % | Cl Clay                      | Low                          | redușă                              | <35      |
| LIMITA DE CURGERE / LIQUID LIMIT             | W <sub>L</sub> =                                           | 37,58 | % | Si Silt                      | Medium                       | medie                               | 35----50 |
| INDICE DE PLASTICIT./PLASTICITY INDEX        | I <sub>P</sub> =W <sub>L</sub> -W <sub>P</sub>             | 23,27 | % |                              | Heigh                        | mare                                | 50----70 |
| INDICE DE CONSISTENȚĂ /<br>CONSISTENCY INDEX | I <sub>C</sub> = (W <sub>L</sub> -<br>W) / I <sub>P</sub>  | 0,51  |   |                              | Very<br>heigh                | foarte<br>mare                      | >70      |
| INDICE DE LICHIDITATE/<br>LIQUIDITY INDEX    | I <sub>L</sub> = (W -<br>W <sub>P</sub> ) / I <sub>P</sub> | 0,49  |   |                              | O                            | organice                            |          |

Executat de / Performed by: Laborant Emilia Dumitru

Data / Date: 17.12.2020

COD PROBA 75

1044

Sef Laborator / Laboratory head: Constanta ANDREI

