

**Cenospheres, CRM, Concentrate of magnetic cenospheres, from coal ash of Kuznetsk, Mocow, Powder**

Art. ID KAZ-9235-2008  
Unit 100 g (powder)  
Deliverydetails No Dangerous Good /not restricted

| Text/Information | Analyte/Parameter                          | CAS number  | Concentration/Value | Unit | Method | Source |
|------------------|--------------------------------------------|-------------|---------------------|------|--------|--------|
|                  | Loss on Ignition (LOI)                     |             | ~1,6                | %    |        |        |
|                  | Silver (Ag)                                | [7440-22-4] | ~0,00002            | %    |        |        |
|                  | Al <sub>2</sub> O <sub>3</sub>             |             | 19,3                | %    |        |        |
|                  | Arsenic (As)                               | [7440-38-2] | ~0,0011             | %    |        |        |
|                  | Barium (Ba)                                | [7440-39-3] | 0,089               | %    |        |        |
|                  | Beryllium (Be)                             | [7440-41-7] | 0,00028             | %    |        |        |
|                  | CO <sub>2</sub>                            |             | 0,51                | %    |        |        |
|                  | CaO                                        |             | 2,77                | %    |        |        |
|                  | Cerium (Ce)                                | [7440-45-1] | 0,0089              | %    |        |        |
|                  | Cobalt (Co)                                | [7440-48-4] | 0,0011              | %    |        |        |
|                  | Chromium (Cr)                              | [7440-47-3] | 0,0066              | %    |        |        |
|                  | Caesium (Cs)                               | [7440-46-2] | 0,00086             | %    |        |        |
|                  | Copper (Cu)                                | [7440-50-8] | 0,0034              | %    |        |        |
|                  | Dysprosium (Dy)                            | [7429-91-6] | ~0,00055            | %    |        |        |
|                  | Erbium (Er)                                | [7440-52-0] | ~0,0003             | %    |        |        |
|                  | Europium (Eu)                              | [7440-53-1] | 0,00014             | %    |        |        |
|                  | Fluorine (F)                               | [7782-41-4] | ~0,2                | %    |        |        |
|                  | FeO                                        |             | ~2,4                | %    |        |        |
|                  | Total Fe as Fe <sub>2</sub> O <sub>3</sub> |             | 4,04                | %    |        |        |
|                  | Gallium (Ga)                               | [7440-55-3] | 0,00093             | %    |        |        |
|                  | Gadolinium (Gd)                            | [7440-54-2] | ~0,00067            | %    |        |        |
|                  | Germanium (Ge)                             | [7440-56-4] | ~0,00009            | %    |        |        |
|                  | Hafnium (Hf)                               | [7440-58-6] | ~0,00069            | %    |        |        |
|                  | Holmium (Ho)                               | [7440-60-0] | ~0,00011            | %    |        |        |
|                  | K <sub>2</sub> O                           |             | 3,5                 | %    |        |        |
|                  | Lanthanum (La)                             | [7439-91-0] | 0,0046              | %    |        |        |
|                  | Lithium (Li)                               | [7439-93-2] | ~0,0055             | %    |        |        |
|                  | Lutetium (Lu)                              | [7439-94-3] | 0,000053            | %    |        |        |
|                  | MgO                                        | [1309-48-4] | 1,64                | %    |        |        |
|                  | MnO                                        |             | 0,049               | %    |        |        |

|                               |             |          |   |
|-------------------------------|-------------|----------|---|
| Molybdenum (Mo)               | [7439-98-7] | ~0,00034 | % |
| Na <sub>2</sub> O             |             | 1,33     | % |
| Niobium (Nb)                  | [7440-03-1] | 0,0015   | % |
| Neodymium (Nd)                | [7440-00-8] | 0,0039   | % |
| Nickel (Ni)                   | [7440-02-0] | 0,0035   | % |
| P <sub>2</sub> O <sub>5</sub> |             | 0,19     | % |
| Lead (Pb)                     | [7439-92-1] | 0,002    | % |
| Praseodymium (Pr)             | [7440-10-0] | ~0,001   | % |
| Rubidium (Rb)                 | [7440-17-7] | 0,0135   | % |
| Sulfur (S)                    | [7704-34-9] | ~0,07    | % |
| Antimony (Sb)                 | [7440-36-0] | ~0,00013 | % |
| Scandium (Sc)                 | [7440-20-2] | 0,0015   | % |
| SiO <sub>2</sub>              |             | 64,1     | % |
| Samarium (Sm)                 | [7440-19-9] | 0,00072  | % |
| Tin (Sn)                      | [7440-31-5] | ~0,00023 | % |
| Strontium (Sr)                | [7440-24-6] | 0,048    | % |
| Tantalum (Ta)                 | [7440-25-7] | ~0,00012 | % |
| Terbium (Tb)                  | [7440-27-9] | 0,000092 | % |
| Thorium (Th)                  | [7440-29-1] | 0,0014   | % |
| TiO <sub>2</sub>              |             | 0,78     | % |
| Thallium (Tl)                 | [7440-28-0] | ~0,00007 | % |
| Thulium (Tm)                  | [7440-30-4] | ~0,00005 | % |
| Uranium (U)                   | [7440-61-1] | 0,00046  | % |
| Vanadium (V)                  | [7440-62-2] | 0,0102   | % |
| Yttrium (Y)                   | [7440-65-5] | 0,0033   | % |
| Ytterbium (Yb)                | [7440-64-4] | 0,00033  | % |
| Zinc (Zn)                     | [7440-66-6] | 0,005    | % |
| Zirconium (Zr)                | [7440-67-7] | 0,0246   | % |