

BRAMMER STANDARD ONLINE CATALOG - COMBUSTION MATERIALS

C, S, O, N IN IRON AND STEEL, CHART 1 of 4

# = class, 1 = CRM and 2 = RM analysis in mass % 34, 17025 = ISO

| # | Number       | Carbon | Sulfur | Oxygen | Nitrogen | Units                    |
|---|--------------|--------|--------|--------|----------|--------------------------|
| 1 | JSS 202-2    | 1.443  | .      | .      | .        | 150 g chips              |
| 1 | JSS 202-1    | 1.386  | .      | .      | .        | 150 g chips last         |
| 1 | NH M02       | 1.34   | 0.007  | .      | .        | 150 g chips              |
| 1 | NCS NS18016  | 1.19   | 0.0080 | .      | .        | 100 g chips              |
| 1 | Y 31916      | 1.19   | 0.0080 | .      | .        | 100 g chips              |
| 2 | KMS HCS-001  | 1.161  | 0.1318 | .      | .        | 100 g chips last         |
| 1 | ECRM 268-1C  | 1.134  | 0.0154 | .      | 2.03     | 100 g chips              |
| 1 | NCS NS18015  | 1.09   | 0.018  | .      | .        | 100 g chips              |
| 1 | Y 31915      | 1.09   | 0.018  | .      | .        | 100 g chips              |
| 1 | DSZU CA02    | 1.03   | 0.0021 | .      | 0.0030   | 200 x 1.05 g balls       |
| 1 | JSS 208-4    | 1.017  | .      | .      | .        | 150 g chips              |
| 2 | KMS HCS-002  | 1.013  | 0.123  | .      | .        | 100 g chips              |
| 1 | JSS 208-3    | 0.998  | .      | .      | .        | 150 g chips last         |
| 1 | DSZU CX010a  | 0.993  | 0.0203 | .      | .        | 200 g chips              |
| 1 | NCS NS18014  | 0.990  | 0.0041 | .      | .        | 100 g chips              |
| 1 | Y 31914      | 0.990  | 0.0041 | .      | .        | 100 g chips              |
| 1 | CZ 2008A     | 0.977  | 0.0091 | .      | 0.0066   | 250 g chips              |
| 1 | TH 1006-4    | 0.952  | 0.0111 | .      | 0.0046   | 100 g chips last         |
| 2 | SAG 0703     | 0.924  | 0.0041 | 17025  | 0.0070   | 100 g chips              |
| 1 | NCS NS18013  | 0.890  | 0.022  | .      | .        | 100 g chips              |
| 1 | Y 31913      | 0.890  | 0.022  | .      | .        | 100 g chips              |
| 1 | VS U13/4     | 0.888  | 0.0070 | .      | .        | 100 g chips              |
| 2 | SAG 0704     | 0.818  | 0.0040 | 17025  | 0.0040   | 100 g chips              |
| 1 | NCS NS13026  | 0.81   | .      | .      | .        | 100 g chips              |
| 1 | TH 1027-2    | 0.726  | 0.0092 | .      | 0.003    | 100 g chips              |
| 1 | 502-989-0780 | 0.774  | 0.0049 | .      | .        | 200 g of 1 g rings 17034 |
| 1 | NCS NS13025  | 0.725  | .      | .      | .        | 100 g chips              |
| 1 | IPT 60A      | 0.715  | 0.012  | .      | .        | 100 g chips              |
| 2 | SAG 0709     | 0.704  | 0.0064 | 17025  | 0.0030   | 100 g chips              |
| 1 | NCS NS11010  | 0.703  | 0.010  | .      | .        | 50 g 0.5g balls last     |
| 1 | ECRM 049-1   | 0.701  | 0.0040 | .      | 0.0031   | 100 g chips              |
| 1 | 502-894-0620 | 0.683  | 0.0128 | .      | .        | 100 g 1 g pins 17034     |
| 1 | 502-894-0619 | 0.681  | 0.0127 | .      | .        | 100 g 1 g pins 17034     |
| 1 | CZ 2007A     | 0.684  | 0.0106 | .      | 0.0128   | 250 g chips              |
| 1 | NCS NS13008  | 0.644  | 0.068  | .      | .        | 100 g chips              |
| 1 | NCS NS18012  | 0.610  | 0.0095 | .      | .        | 100 g chips              |
| 1 | Y 31912      | 0.610  | 0.0095 | .      | .        | 100 g chips              |
| 1 | ECRM 079-2   | 0.596  | 0.192  | .      | 0.0074   | 100 g chips              |
| 1 | NCS NS13024  | 0.59   | .      | .      | .        | 100 g chips              |
| 1 | SRM 2160     | 0.584  | 0.012  | .      | .        | 200 g 1 g pins           |
| 2 | BS CSN 2-2   | 0.548  | 0.028  | .      | 0.076    | 500 g 1 g pins           |
| 1 | NCS NS18011  | 0.543  | 0.012  | .      | .        | 100 g chips              |
| 1 | Y 31911      | 0.543  | 0.012  | .      | .        | 100 g chips              |
| 1 | NCS NS28027  | 0.523  | 0.017  | .      | .        | 100 g chips              |
| 1 | NCS NS93011  | 0.512  | 0.0095 | .      | .        | 100 g chips              |
| 1 | IPT 59A      | 0.495  | 0.018  | .      | .        | 100 g chips              |
| 1 | NCS NS13005  | 0.485  | 0.024  | .      | .        | 100 g chips              |
| 1 | NCS NS13023  | 0.48   | .      | .      | .        | 100 g chips              |
| 1 | IARM 259A    | 0.479  | 0.0007 | 0.0014 | 0.0077   | 100 g chips              |
| 2 | BS CSN 2-1   | 0.476  | 0.034  | .      | 0.064    | 500 g 1 g pins           |
| 1 | NCS NS28029  | 0.465  | 0.020  | .      | .        | 100 g chips              |
| 1 | NCS NS28005  | 0.462  | 0.0096 | .      | .        | 100 g chips              |
| 1 | CZ 2006A     | 0.461  | 0.0172 | .      | 0.0066   | 250 g chips              |
| 1 | NCS NS18010  | 0.455  | 0.019  | .      | .        | 100 g chips              |
| 1 | Y 31910      | 0.455  | 0.019  | .      | .        | 100 g chips              |
| 2 | DH E2184     | 0.4433 | 0.0152 | .      | .        | 50 g chips               |
| 2 | SAG 0707     | 0.435  | 0.1965 | 17025  | 0.0064   | 100 g chips              |
| 1 | ECRM 058-2C  | 0.424  | 0.1712 | .      | 0.0107   | 100 g chips              |

| # | Number       | Carbon | Sulfur | Oxygen | Nitrogen | Units                    |
|---|--------------|--------|--------|--------|----------|--------------------------|
| 1 | JSS 202-2    | 1.443  | .      | .      | .        | 150 g chips              |
| 1 | JSS 202-1    | 1.386  | .      | .      | .        | 150 g chips last         |
| 1 | NH M02       | 1.34   | 0.007  | .      | .        | 150 g chips              |
| 1 | NCS NS18016  | 1.19   | 0.0080 | .      | .        | 100 g chips              |
| 1 | Y 31916      | 1.19   | 0.0080 | .      | .        | 100 g chips              |
| 2 | KMS HCS-001  | 1.161  | 0.1318 | .      | .        | 100 g chips last         |
| 1 | ECRM 268-1C  | 1.134  | 0.0154 | .      | 2.03     | 100 g chips              |
| 1 | NCS NS18015  | 1.09   | 0.018  | .      | .        | 100 g chips              |
| 1 | Y 31915      | 1.09   | 0.018  | .      | .        | 100 g chips              |
| 1 | DSZU CA02    | 1.03   | 0.0021 | .      | 0.0030   | 200 x 1.05 g balls       |
| 1 | JSS 208-4    | 1.017  | .      | .      | .        | 150 g chips              |
| 2 | KMS HCS-002  | 1.013  | 0.123  | .      | .        | 100 g chips              |
| 1 | JSS 208-3    | 0.998  | .      | .      | .        | 150 g chips last         |
| 1 | DSZU CX010a  | 0.993  | 0.0203 | .      | .        | 200 g chips              |
| 1 | NCS NS18014  | 0.990  | 0.0041 | .      | .        | 100 g chips              |
| 1 | Y 31914      | 0.990  | 0.0041 | .      | .        | 100 g chips              |
| 1 | CZ 2008A     | 0.977  | 0.0091 | .      | 0.0066   | 250 g chips              |
| 1 | TH 1006-4    | 0.952  | 0.0111 | .      | 0.0046   | 100 g chips last         |
| 2 | SAG 0703     | 0.924  | 0.0041 | 17025  | 0.0070   | 100 g chips              |
| 1 | NCS NS18013  | 0.890  | 0.022  | .      | .        | 100 g chips              |
| 1 | Y 31913      | 0.890  | 0.022  | .      | .        | 100 g chips              |
| 1 | VS U13/4     | 0.888  | 0.0070 | .      | .        | 100 g chips              |
| 2 | SAG 0704     | 0.818  | 0.0040 | 17025  | 0.0040   | 100 g chips              |
| 1 | NCS NS13026  | 0.81   | .      | .      | .        | 100 g chips              |
| 1 | TH 1027-2    | 0.726  | 0.0092 | .      | 0.003    | 100 g chips              |
| 1 | 502-989-0780 | 0.774  | 0.0049 | .      | .        | 200 g of 1 g rings 17034 |
| 1 | NCS NS13025  | 0.725  | .      | .      | .        | 100 g chips              |
| 1 | IPT 60A      | 0.715  | 0.012  | .      | .        | 100 g chips              |
| 2 | SAG 0709     | 0.704  | 0.0064 | 17025  | 0.0030   | 100 g chips              |
| 1 | NCS NS11010  | 0.703  | 0.010  | .      | .        | 50 g 0.5g balls last     |
| 1 | ECRM 049-1   | 0.701  | 0.0040 | .      | 0.0031   | 100 g chips              |
| 1 | 502-894-0620 | 0.683  | 0.0128 | .      | .        | 100 g 1 g pins 17034     |
| 1 | 502-894-0619 | 0.681  | 0.0127 | .      | .        | 100 g 1 g pins 17034     |
| 1 | CZ 2007A     | 0.684  | 0.0106 | .      | 0.0128   | 250 g chips              |
| 1 | NCS NS13008  | 0.644  | 0.068  | .      | .        | 100 g chips              |
| 1 | NCS NS18012  | 0.610  | 0.0095 | .      | .        | 100 g chips              |
| 1 | Y 31912      | 0.610  | 0.0095 | .      | .        | 100 g chips              |
| 1 | ECRM 079-2   | 0.596  | 0.192  | .      | 0.0074   | 100 g chips              |
| 1 | NCS NS13024  | 0.59   | .      | .      | .        | 100 g chips              |
| 1 | SRM 2160     | 0.584  | 0.012  | .      | .        | 200 g 1 g pins           |
| 2 | BS CSN 2-2   | 0.548  | 0.028  | .      | 0.076    | 500 g 1 g pins           |
| 1 | NCS NS18011  | 0.543  | 0.012  | .      | .        | 100 g chips              |
| 1 | Y 31911      | 0.543  | 0.012  | .      | .        | 100 g chips              |
| 1 | NCS NS28027  | 0.523  | 0.017  | .      | .        | 100 g chips              |
| 1 | NCS NS93011  | 0.512  | 0.0095 | .      | .        | 100 g chips              |
| 1 | IPT 59A      | 0.495  | 0.018  | .      | .        | 100 g chips              |
| 1 | NCS NS13005  | 0.485  | 0.024  | .      | .        | 100 g chips              |
| 1 | NCS NS13023  | 0.48   | .      | .      | .        | 100 g chips              |
| 1 | IARM 259A    | 0.479  | 0.0007 | 0.0014 | 0.0077   | 100 g chips              |
| 2 | BS CSN 2-1   | 0.476  | 0.034  | .      | 0.064    | 500 g 1 g pins           |
| 1 | NCS NS28029  | 0.465  | 0.020  | .      | .        | 100 g chips              |
| 1 | NCS NS28005  | 0.462  | 0.0096 | .      | .        | 100 g chips              |
| 1 | CZ 2006A     | 0.461  | 0.0172 | .      | 0.0066   | 250 g chips              |
| 1 | NCS NS18010  | 0.455  | 0.019  | .      | .        | 100 g chips              |
| 1 | Y 31910      | 0.455  | 0.019  | .      | .        | 100 g chips              |
| 2 | DH E2184     | 0.4433 | 0.0152 | .      | .        | 50 g chips               |
| 2 | SAG 0707     | 0.435  | 0.1965 | 17025  | 0.0064   | 100 g chips              |
| 1 | ECRM 058-2C  | 0.424  | 0.1712 | .      | 0.0107   | 100 g chips              |

C, S, O, N IN IRON AND STEEL, CHART 2 of 4

# = class, 1 = CRM and 2 = RM analysis in mass % 34, 17025 = ISO

| # | Number       | Carbon | Sulfur  | Oxygen | Nitrogen  | Units                         |
|---|--------------|--------|---------|--------|-----------|-------------------------------|
| 1 | NCS NS28004  | 0.416  | 0.022   | .      | .         | 100 g chips                   |
| 1 | NCS NS18009  | 0.415  | 0.020   | .      | .         | 100 g chips                   |
| 1 | Y 31909      | 0.415  | 0.020   | .      | .         | 100 g chips                   |
| 2 | DH E2333     | 0.3876 | 0.0585  | .      | .         | 50 g chips                    |
| 1 | 502-986-0775 | 0.398  | 0.292   | .      | 34, 17025 | 100 g 1 g pins                |
| 1 | NCS NS18008  | 0.376  | 0.028   | .      | .         | 100 g chips                   |
| 1 | Y 31908      | 0.376  | 0.028   | .      | .         | 100 g chips                   |
| 1 | NCS NS93012  | 0.375  | 0.046   | .      | .         | 100 g chips                   |
| 1 | NCS NS13022  | 0.37   | .       | .      | .         | 100 g chips                   |
| 1 | CZ 2005A     | 0.358  | 0.0250  | .      | 0.0081    | 250 g chips, last             |
| 1 | NCS NS93005  | 0.357  | 0.018   | .      | .         | 100 g chips                   |
| 2 | SAG 0706     | 0.347  | 0.0245  | 17025  | 0.0098    | 100 g chips                   |
| 1 | NCS NS28025a | 0.330  | 0.024   | .      | .         | 100 g chips                   |
| 1 | NCS NS11003  | 0.322  | 0.020   | .      | .         | 150 g chips                   |
| 1 | IPT 58A      | 0.316  | 0.021   | .      | .         | 120 g chips                   |
| 1 | NCS NS18007  | 0.312  | 0.026   | .      | .         | 100 g chips                   |
| 1 | Y 31907      | 0.312  | 0.026   | .      | .         | 100 g chips                   |
| 1 | NCS NS93009  | 0.310  | 0.031   | .      | .         | 100 g chips                   |
| 1 | JSS 252-3    | 0.302  | 0.0415  | .      | .         | 150 g chips                   |
| 1 | NCS NS93004  | 0.293  | 0.040   | .      | .         | 100 g chips                   |
| 1 | NCS NS18006  | 0.282  | 0.033   | .      | .         | 100 g chips                   |
| 1 | Y 31906      | 0.282  | 0.033   | .      | .         | 100 g chips                   |
| 2 | SAG 0708     | 0.257  | 0.0014  | 17025  | .         | 100 g chips                   |
| 1 | NCS NS11011  | 0.235  | 0.039   | .      | .         | 100 g chips                   |
| 1 | NCS NS93008c | 0.233  | 0.030   | .      | .         | 100 g chips                   |
| 1 | VS U19/2     | 0.233  | 0.030   | .      | .         | 100 g chips                   |
| 1 | NCS NS13021  | 0.21   | .       | .      | .         | 100 g chips                   |
| 1 | NCS NS18005  | 0.204  | 0.022   | .      | .         | 100 g chips                   |
| 1 | Y 31905      | 0.204  | 0.022   | .      | .         | 100 g chips                   |
| 2 | DH E2218     | 0.1989 | 0.0014  | .      | 0.0155    | 50 g chips                    |
| 1 | VS 6-2       | 0.195  | 0.0250  | .      | .         | 100 g chips                   |
| 1 | NCS NS93014  | 0.190  | 0.030   | .      | .         | 100 g chips                   |
| 2 | DH E2161     | 0.1843 | 0.0043  | .      | 0.0186    | 50 g chips                    |
| 2 | SAG 0705     | 0.184  | 0.0020  | 17025  | 0.0580    | 100 g chips                   |
| 1 | VS U15/6     | 0.182  | 0.0218  | .      | .         | 100 g chips                   |
| 1 | JK 21        | 0.1741 | 0.011   | .      | 0.008     | 150 g chips                   |
| 2 | DH E21-372   | 0.1720 | 0.0011  | .      | 0.0120    | 50 g chips                    |
| 2 | DH E21-371   | 0.1712 | 0.0011  | .      | 0.0119    | 50 g chips                    |
| 1 | NCS NS18004  | 0.171  | 0.0102  | .      | .         | 100 g chips                   |
| 1 | Y 31904      | 0.171  | 0.0102  | .      | .         | 100 g chips                   |
| 1 | ECRM 077-3   | 0.1650 | 0.0162  | .      | 0.00860   | 100 g chips                   |
| 2 | DH E2172     | 0.1611 | 0.0147  | .      | .         | 50 g chips                    |
| 1 | NCS NS28021  | 0.160  | 0.028   | .      | .         | 100 g chips                   |
| 2 | DH E2122     | 0.1599 | 0.0016  | .      | 0.0078    | 50 g chips                    |
| 2 | SAG 0710     | 0.155  | 0.0209  | 17025  | .         | 100 g chips                   |
| 2 | DH E23-211   | 0.154  | 0.0009  | .      | 0.0040    | 50 g chips                    |
| 2 | DH E2201     | 0.1492 | 0.0048  | .      | .         | 50 g chips                    |
| 2 | DH E21-201   | 0.1470 | 0.0109  | .      | .         | 50 g chips                    |
| 1 | NCS NS93013b | 0.146  | 0.014   | .      | .         | 100 g chips                   |
| 1 | NCS NS11007  | 0.146  | 0.013   | .      | .         | 50 g 0.5g balls last of stock |
| 2 | DH E2106     | 0.1406 | 0.0277  | .      | 0.0063    | 50 g chips                    |
| 2 | DH E2334     | 0.135  | 0.0010  | .      | 0.0147    | 50 g chips last of stock      |
| 2 | DH E2175     | 0.1290 | 0.0181  | .      | .         | 50 g chips                    |
| 1 | VS U11/5     | 0.119  | 0.027   | .      | .         | 100 g chips                   |
| 2 | DH E2127     | 0.1087 | 0.00072 | .      | 0.0103    | 50 g chips                    |
| 1 | VS U17/4     | 0.106  | 0.137   | .      | .         | 100 g chips                   |
| 1 | ECRM 286-1   | 0.100  | 0.280   | .      | 0.043     | 100 g chips                   |
| 1 | NCS NS13020  | 0.10   | .       | .      | .         | 100 g chips                   |
| 1 | NCS NS11006  | 0.097  | 0.021   | .      | .         | 50 g 0.5g balls last of stock |
| 2 | DH E2111     | 0.0953 | 0.0066  | .      | .         | 50 g chips last of stock      |
| 1 | VS 6-1       | 0.094  | 0.0205  | .      | .         | 100 g chips                   |
| 1 | TH 1041      | 0.0925 | 0.0100  | .      | .         | 100 g chips                   |
| 1 | NH M01       | 0.090  | 0.057   | .      | .         | 150 g chips                   |

| # | Number     | Carbon | Sulfur | Oxygen | Nitrogen | Units            |
|---|------------|--------|--------|--------|----------|------------------|
| 1 | JSS 202-2  | 1.443  | .      | .      | .        | 150 g chips      |
| 1 | JSS 202-1  | 1.386  | .      | .      | .        | 150 g chips last |
| 1 | NH M02     | 1.34   | 0.007  | .      | .        | 150 g chips      |
| 1 | NCS NS1801 |        |        |        |          |                  |

## C, S, O, N IN IRON AND STEEL, CHART 3 of 4

# = class, 1 = CRM and 2 = RM analysis in mass % 34, 17025 = ISO

| # | Number                  | Carbon  | Sulfur  | Oxygen | Nitrogen         | Units                          |
|---|-------------------------|---------|---------|--------|------------------|--------------------------------|
| 1 | VS S41/5                | 0.085   | 0.0069  | .      | 0.142            | 100 g chips                    |
| 1 | TH 1038                 | 0.0823  | 0.247   | .      | .                | 100 g chips                    |
| 1 | NCS NS18003             | 0.082   | 0.035   | .      | .                | 100 g chips                    |
| 1 | Y 31903                 | 0.082   | 0.035   | .      | .                | 100 g chips                    |
| 2 | DH E23-201              | 0.0800  | 0.0027  | .      | 0.0120           | 50 g chips                     |
| 2 | DH E2317                | 0.0795  | 0.0014  | .      | .                | 50 g chips                     |
| 2 | DH E2318                | 0.0793  | .       | .      | .                | 50 g chips                     |
| 1 | CZ 2004A                | 0.079   | 0.0464  | .      | 0.0038           | 250 g chips, last              |
| 1 | TH 1042-3               | 0.079   | 0.0231  | .      | 0.0091           | 100 g chips                    |
| 1 | <u>502-991-0732</u>     | 0.072   | 0.0031  | .      | 0.0737           | 100 g of 1 g pins <b>17034</b> |
| 2 | BS CSN A                | 0.068   | 0.305   | .      | 0.0081           | 100 g chips                    |
| 1 | CZ 2026A                | 0.068   | 0.255   | .      | .                | 250 g chips                    |
| 1 | <u>502-929-1421</u>     | 0.067   | 0.0004  | .      | <b>34, 17025</b> | 200 g 1 g rings                |
| 1 | ECRM 294-1C             | 0.0657  | 0.00031 | .      | 0.566            | 100 g chips                    |
| 2 | DH E2326                | 0.0637  | 0.0013  | .      | .                | 50 g chips                     |
| 1 | <u>503-501-0794</u>     | 0.061   | 0.0230  | 0.0058 | 0.0111           | 100 g of 1 g pins <b>17034</b> |
| 2 | DH E2322                | 0.0609  | 0.0009  | .      | .                | 50 g chips                     |
| 2 | DH E21-961              | 0.0609  | 0.0006  | .      | 0.0034           | 50 g chips                     |
| 1 | TH 1040-4               | 0.054   | 0.0016  | .      | 0.0010           | 100 g chips                    |
| 1 | <u>503-514-0742</u>     | 0.051   | 0.0021  | 0.0024 | 0.0599           | 100 g of 1 g pins <b>17034</b> |
| 2 | DH E2135                | 0.0502  | 0.0083  | .      | 0.0019           | 50 g chips                     |
| 2 | DH E22041               | 0.0469  | 0.0277  | .      | 0.0035           | 50 g chips                     |
| 1 | JSS 201-15              | 0.0439  | .       | .      | .                | 150 g chips                    |
| 1 | JSS 201-16              | 0.0413  | .       | .      | .                | 150 g chips                    |
| 1 | NCS NS11026a            | 0.041   | 0.0025  | .      | .                | 100 g chips                    |
| 1 | CZ 2003A                | 0.0402  | 0.0316  | .      | 0.0046           | 250 g chips                    |
| 1 | TH 1070                 | 0.0392  | 0.0217  | .      | 0.004            | 100 g chips                    |
| 1 | TH 1039-2               | 0.0352  | 0.0222  | .      | 0.0027           | 100 g chips                    |
| 1 | ECRM 273-1C             | 0.0336  | 0.0004  | .      | 0.0444           | 100 g chips                    |
| 1 | VS U10/5                | 0.032   | 0.0124  | .      | .                | 100 g powder                   |
| 2 | DH E2179                | 0.0232  | .       | .      | .                | 50 g chips                     |
| 1 | NCS NS11040             | 0.019   | 0.0116  | .      | .                | 100 g chips                    |
| 1 | IARM 214A               | 0.018   | 0.002   | 0.0026 | 0.27             | 100 g chips                    |
| 1 | JSS 204-2               | 0.0178  | .       | .      | .                | 150 g chips                    |
| 1 | ECRM 295-1C             | 0.0166  | 0.0004  | .      | 0.0615           | 100 g chips                    |
| 1 | TH 1069                 | 0.0148  | 0.0129  | .      | 0.0043           | 100 g chips                    |
| 1 | ECRM 298-1C             | 0.0146  | 0.0006  | .      | 0.263            | 100 g chips                    |
| 1 | JK 36                   | 0.0125  | 0.0126  | .      | 0.0337           | 150 g chips                    |
| 1 | <u>502-918-1427-5-R</u> | 0.012   | 0.0269  | .      | <b>34, 17025</b> | 200 g 1 g rings                |
| 1 | <u>502-946-1021</u>     | 0.0114  | 0.0004  | .      | <b>34, 17025</b> | 100 g 1 g balls                |
| 2 | KMS HNCS-001            | 0.01017 | 0.00377 | .      | 0.0436           | 100 g 1 g pins                 |
| 1 | JSS 1203-5              | 0.00876 | .       | .      | .                | 150 g chips                    |
| 1 | SRM 166c                | 0.00781 | .       | .      | .                | 100 g chips                    |
| 1 | NCS NS11024             | 0.0066  | 0.023   | .      | .                | 100 g chips                    |

# Number Carbon Sulfur Oxygen Nitrogen Units

## C, S, O, N IN IRON AND STEEL, CHART 4 of 4

# = class, 1 = CRM and 2 = RM analysis in mass % 34, 17025 = ISO

| # | Number              | Carbon    | Sulfur  | Oxygen | Nitrogen         | Units                        |
|---|---------------------|-----------|---------|--------|------------------|------------------------------|
| 1 | <u>502-970-1001</u> | 0.0060    | 0.0038  | .      | <b>34, 17025</b> | 100 g powder                 |
| 1 | NCS NS11039         | 0.0051    | 0.0058  | .      | .                | 100 g chips                  |
| 2 | DH E2156            | 0.00483   | 0.01515 | .      | .                | 50 g chips                   |
| 1 | JSS 1202-4          | 0.00476   | .       | .      | .                | 150 g chips                  |
| 1 | NCS NS11041         | 0.0040    | 0.0053  | .      | .                | 100 g chips                  |
| 2 | DH E2163            | 0.0036    | 0.0026  | .      | .                | 50 g chips                   |
| 1 | TH 1045-3           | 0.0024    | 0.0043  | .      | 0.0047           | 100 g chips last of stock    |
| 1 | VS U14/5            | 0.0023    | 0.0057  | .      | .                | 100 g chips                  |
| 1 | JSS 1207-3          | 0.00221   | .       | .      | .                | 150 g chips                  |
| 1 | <u>502-999-1000</u> | 0.0021    | 0.0012  | 0.0005 | 0.0005           | 100 g chips <b>34, 17025</b> |
| 1 | CZ 2025A            | 0.0020    | 0.0018  | .      | .                | 200 g chips                  |
| 1 | JSS 1206-2          | 0.00192   | .       | .      | .                | 150 g chips                  |
| 2 | KMS LCSN-001        | 0.00169   | 0.00135 | .      | 0.00045          | 100 g chips last of stock    |
| 1 | NCS NS11012         | 0.0016    | 0.0063  | .      | .                | 100 g chips                  |
| 1 | JSS 1205-3          | 0.00081   | .       | .      | .                | 150 g chips                  |
| 1 | SRM 131H            | (0.00078) | 0.00074 | .      | .                | 100 g chips                  |
| 2 | KMS LCSON-001e      | 0.0009    | 0.0008  | 0.0010 | 0.0005           | 100 g 1 g pins               |
| 1 | JSS 1201-4          | 0.00066   | .       | .      | .                | 150 g chips                  |
| 2 | KMS LCSN-003a       | 0.00048   | 0.00043 | .      | 0.00050          | 100 g chips                  |
| 2 | KMS HOCs-002        | 0.0004    | 0.0010  | 0.0228 | 0.0004           | 100 g 1 g pins               |
| 1 | TH 1043-2           | 0.00018   | 0.00009 | .      | 0.00023          | 100 g chips                  |
| 1 | JSS 243-7           | .         | 0.379   | .      | .                | 150 g chips                  |
| 1 | NCS NS13032         | .         | 0.096   | .      | .                | 100 g chips                  |
| 2 | DH E2154            | .         | 0.0472  | .      | .                | 50 g chips                   |
| 1 | NCS NS13029         | .         | 0.037   | .      | .                | 100 g chips                  |
| 1 | JSS 242-13          | .         | 0.0297  | .      | .                | 150 g chips                  |
| 1 | <u>502-997-0731</u> | .         | 0.0296  | 0.0058 | 0.0578           | 100 g 1 g pins <b>17034</b>  |
| 1 | NCS NS13028         | .         | 0.017   | .      | .                | 100 g chips                  |
| 1 | NCS NS13027         | .         | 0.0105  | .      | .                | 100 g chips                  |
| 1 | JSS 240-14          | .         | 0.0042  | .      | .                | 150 g chips last of stock    |
| 1 | JSS 244-12          | .         | 0.00177 | .      | .                | 150 g chips                  |
| 1 | SRM 2168            | .         | 0.00107 | .      | .                | 150 g chips                  |

# Number Carbon Sulfur Oxygen Nitrogen Units

## OXYGEN AND NITROGEN IN IRON AND STEEL

# = class, 1 = CRM 2 = RM analysis in mass % 34, 17025 = ISO Accreditation

| # | Number              | O       | N       | Size   | Form                                  |
|---|---------------------|---------|---------|--------|---------------------------------------|
| 2 | NS15-3              | 0.1246  | .       | 50 g   | 0.5 g pins last of stock              |
| 2 | NS16-1              | 0.1204  | .       | 50 g   | 0.5 g pins                            |
| 2 | JSM M403-4          | 0.11176 | 0.00063 | 100 g  | 1 g pins                              |
| 1 | JSS 389-1           | 0.052   | .       | 8 rods | 5 mm Ø x 230 mm                       |
| 2 | SS-10-17            | 0.04509 | 0.00129 | 50 g   | 0.5 g pins last of stock              |
| 2 | SS-10-18            | 0.04479 | 0.00129 | 50 g   | 0.5 g pins                            |
| 1 | BAM 029-1           | 0.0312  | 0.0083  | 100 g  | 3 rods, 8 mm Ø x 80 mm                |
| 1 | Y TSN012            | 0.0221  | 0.0020  | 25 g   | 0.5 g balls                           |
| 1 | DSZU CA05           | 0.0202  | 0.0044  | 100 g  | rods, ~2.8 mm Ø x ~80 mm rods         |
| 1 | VS 7-9              | 0.020   | 0.0043  | 100 g  | rods, ~2.5 mm Ø x ~220 mm             |
| 1 | JK 35               | 0.0198  | .       | 1 rod  | 10 mm Ø x 500 mm last of stock        |
| 1 | JSS 387-2           | 0.0194  | .       | 8 rods | 5 mm Ø x 230 mm L                     |
| 2 | JSM M402-6          | 0.01799 | 0.01320 | 100 g  | 1 g pins                              |
| 1 | JSS 387-1           | 0.0179  | .       | 8 rods | 5 mm Ø x 230 mm, last of stock        |
| 2 | SS-3-67             | 0.01694 | 0.00454 | 100 g  | 1 g pins                              |
| 1 | NCS NS20050         | 0.0166  | 0.0026  | 50 g   | 1 g balls                             |
| 1 | Y TSN005            | 0.0160  | 0.0017  | 50 g   | 1 g balls                             |
| 1 | DSZU CA08           | 0.0152  | 0.0034  | 50 g   | 0.5 g pins                            |
| 1 | JSS 386-1           | 0.0142  | .       | 8 rods | 5 mm Ø x 230 mm                       |
| 1 | Y TSN006            | 0.0130  | 0.0038  | 50 g   | 1 g balls                             |
| 1 | VS 7-8              | 0.0121  | 0.0072  | 100 g  | rods, ~3 mm Ø x 200 mm                |
| 1 | DSZU CA06           | 0.0120  | 0.0072  | 100 g  | rods, ~2.8 mm Ø x ~80 mm rods         |
| 1 | NCS NS11050         | 0.0120  | 0.0019  | 50 g   | 1 g balls                             |
| 1 | Y TSN002            | 0.0117  | 0.0023  | 50 g   | 1 g balls                             |
| 1 | BAM 028-1           | 0.0113  | 0.0029  | 100 g  | 3 rods, ~3 mm Ø x ~80 mm              |
| 1 | VS 7-14/1           | 0.011   | 0.0101  | 100 g  | rods, ~4 mm Ø x ~10 mm rods           |
| 1 | Y 41129             | 0.0108  | 0.0027  | 50 g   | 1 g balls                             |
| 1 | NCS NS11056         | 0.0107  | 0.142   | 50 g   | 1 g balls                             |
| 1 | VS 7-14/2           | 0.0103  | 0.0096  | 100 g  | rods, ~4 mm Ø x ~10 mm rods           |
| 1 | BCS 318B *          | 0.0103  | .       | 100 g  | 1 rod, 12.7 mm Ø x 127 mm * Sale Item |
| 1 | VS 7-14             | 0.0100  | 0.0101  | 100 g  | rods, ~4 mm Ø x ~10 mm rods           |
| 2 | SS-2-113            | 0.01005 | 0.00197 | 100 g  | 1 g pins                              |
| 1 | BCS 318A *          | 0.0096  | .       | 100 g  | 2 rods, 6.35 mm Ø x 95 mm * Sale Item |
| 1 | BAM 027-1           | 0.0084  | 0.0157  | 100 g  | 3 rods, 8 mm Ø x 80 mm                |
| 1 | 58A MS51012         | 0.0079  | 0.0149  | 50 g   | 1 g balls                             |
| 1 | Y TSN007            | 0.0078  | 0.0023  | 50 g   | 1 g balls                             |
| 1 | JK 34               | 0.0068  | .       | 1 rod  | 8 mm Ø x 500 mm each                  |
| 1 | NCS NS11037         | 0.0066  | 0.109   | 50 g   | 0.5 g pins                            |
| 1 | NCS NS11052         | 0.0062  | 0.00075 | 50 g   | 1 g balls                             |
| 1 | NCS NS20049         | 0.0058  | 0.0040  | 50 g   | 1 g balls                             |
| 1 | DSZU CA07           | 0.0055  | 0.0292  | 100 g  | rods, ~1.7 mm Ø x ~80 mm rods         |
| 1 | VS 7-7              | 0.0055  | 0.0292  | 50 g   | ~1.5 mm Ø x ~115 mm rods              |
| 1 | Y TSN009            | 0.0043  | 0.0380  | 25 g   | 0.5 g balls                           |
| 1 | 58A SD51075         | 0.0043  | 0.0100  | 50 g   | 1 g balls                             |
| 1 | NCS NS11022         | 0.0038  | 0.0820  | 25 g   | 0.5 g pins last                       |
| 1 | <u>502-198-0673</u> | 0.0038  | .       | 100 g  | 1 g pins <u>34, 17025</u>             |
| 1 | 58A SD51074         | 0.0037  | 0.0253  | 50 g   | 0.5 g balls                           |
| 1 | <u>502-257-0717</u> | 0.0035  | 0.0785  | 100 g  | 1 g pins <u>34, 17025</u>             |
| 1 | <u>502-257-0659</u> | 0.0032  | 0.0660  | 100 g  | 1 g pins <u>34, 17025</u>             |
| 1 | BAM 026-1           | 0.0031  | 0.0053  | 100 g  | 3 rods, 8 mm Ø x 80 mm                |

| # | Number | O | N | Size | Form |
|---|--------|---|---|------|------|
|---|--------|---|---|------|------|

## OXYGEN AND NITROGEN IN IRON AND STEEL

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| # | Number              | O         | N       | Size                 | Form                          |
|---|---------------------|-----------|---------|----------------------|-------------------------------|
| 1 | NCS NS41007         | 0.0029    | 0.0037  | 20 g                 | 1 g balls                     |
| 1 | Y TSN004            | 0.0029    | 0.0036  | 50 g                 | 1 g balls                     |
| 1 | JK 32               | 0.0028    | .       | 1 rod                | 10 mm Ø x 500 mm each         |
| 1 | BAM 026-2           | 0.0025    | 0.0042  | 100 g                | 3 rods, 8 mm Ø x 80 mm        |
| 1 | SRM 1754            | 0.0024    | 0.0081  | 1 rod                | 0.95 cm x 0.95 cm x 10.2 cm   |
| 1 | NCS NS11054         | 0.0023    | 0.0096  | 50 g                 | 1 g balls                     |
| 1 | NCS NS20035b        | 0.0022    | 0.0061  | 50 g                 | 1 g balls                     |
| 1 | NCS NS11053         | 0.0022    | 0.0032  | 50 g                 | 1 g balls                     |
| 1 | Y TSN003            | 0.0021    | 0.0035  | 50 g                 | 1 g balls                     |
| 1 | Y TSN008            | 0.0020    | 0.0557  | 25 g                 | 0.5 g balls                   |
| 1 | NCS NS20048a        | 0.0017    | 0.0070  | 50 g                 | 1 g balls                     |
| 1 | JSS 384-2           | 0.00163   | .       | 8 rods               | 5 mm Ø x 230 mm L             |
| 1 | JK 31               | 0.0015    | .       | 1 rod                | 8 mm Ø x 500 mm each          |
| 1 | NCS NS11051         | 0.0012    | 0.0045  | 50 g                 | 1 g balls                     |
| 1 | NCS NS21002b        | 0.00115   | 0.0055  | 50 g                 | 1 g balls                     |
| 2 | SS-4-102            | 0.00114   | 0.01329 | 100 g                | 1 g pins last                 |
| 1 | Y TSN010            | 0.0011    | 0.0055  | 50 g                 | 1 g balls                     |
| 1 | ECRM 267-1          | 0.00096   | 0.0266  | 100 g                | 1 g pins                      |
| 2 | SS-4-114            | 0.00092   | 0.01305 | 100 g                | 1 g pins                      |
| 1 | VS 7-6              | 0.0009    | 0.0067  | 100 g                | ~3 mm Ø x ~200 mm rods        |
| 1 | DSZU CA04           | 0.00088   | 0.0067  | 100 g                | rods, ~2.8 mm Ø x ~80 mm rods |
| 2 | JSM M401-19         | 0.00078   | 0.00537 | 50 g                 | 0.5 g pins                    |
| 1 | Y TSN011a           | 0.00068   | 0.0091  | 50 g                 | 1 g balls                     |
| 1 | NCS NS11055         | 0.00058   | 0.0028  | 50 g                 | 1 g balls                     |
| 1 | Y TSN013            | 0.00049   | 0.0042  | 50 g                 | 1 g balls                     |
| 1 | JSS 390-1           | 0.00042   | .       | ~ 380g               | 8 Rods 6 mm Ø x 230 mm        |
| 1 | SRM 1094            | 0.0004    | .       | 1 rod                | 0.6 mm Ø x 8.2 cm             |
| 1 | DSZU CA01a          | 0.00035   | 0.0029  | 45 g                 | 0.9 g pins                    |
| 1 | JSS 382-1           | 0.00026   | .       | ~ 380g               | 8 Rods 6 mm Ø x 230 mm        |
| 1 | JSAAC 0111          | 0.00023   | .       | 32 mm Ø x 30 mm disc |                               |
| 1 | JSS 381-1           | (0.00008) | .       | ~ 380g               | 8 Rods 6 mm Ø x 230 mm        |
| 1 | ECRM 268-1C         | .         | 2.03    | 100 g                | chips                         |
| 1 | <u>502-936-0763</u> | .         | 1.00    | 50 g                 | 0.5 g pins <u>34, 17025</u>   |
| 1 | VS 7-22             | .         | 0.398   | 100 g                | chips                         |
| 1 | JSS 371-2           | .         | 0.199   | 150 g                | chips                         |
| 1 | VS 7-21             | .         | 0.0241  | 100 g                | chips                         |
| 2 | DH E2126            | .         | 0.0153  | 50 g                 | chips last of stock           |
| 1 | VS 7-11             | .         | 0.0152  | 100 g                | chips                         |
| 1 | NCS NS13012         | .         | 0.012   | 150 g                | chips                         |
| 1 | DSZU CA09           | .         | 0.0105  | 50 g                 | 0.5 g pins                    |
| 1 | NCS NS13011         | .         | 0.0099  | 150 g                | chips                         |
| 1 | NCS NS13010         | .         | 0.0096  | 150 g                | chips                         |
| 1 | VS 7-3/2            | .         | 0.0093  | 100 g                | chips                         |
| 1 | NCS NS14001         | .         | 0.0081  | 100 g                | chips                         |
| 1 | NCS NS13009         | .         | 0.0078  | 150 g                | chips                         |
| 1 | NCS NS13037         | .         | 0.0067  | 150 g                | chips                         |
| 1 | NCS NS13036         | .         | 0.0064  | 150 g                | chips                         |
| 1 | NCS NS14003         | .         | 0.0048  | 100 g                | chips                         |
| 1 | JSS 367-9           | .         | 0.0044  | 150 g                | chips                         |
| 1 | NCS NS13034         | .         | 0.0044  | 150 g                | chips                         |
| 1 | NCS NS13033         | .         | 0.0043  | 150 g                | chips                         |
| 1 | VS 7-2/2            | .         | 0.0039  | 100 g                | chips                         |
| 1 | VS 7-10             | .         | 0.0038  | 100 g                | chips                         |
| 1 | JSS 366-9           | .         | 0.00065 | 150 g                | chips                         |

| # | Number | O | N | Size | Form |
|---|--------|---|---|------|------|
|---|--------|---|---|------|------|

## RM OXYGEN IN STEEL SET

no uncertainties, SET ONLY discs 37 mm Ø x 20 mm

| Number        | O      | Number       | O     |
|---------------|--------|--------------|-------|
| JSM M405a 01a | <0.001 | JSM M405a 4a | 0.053 |
| JSM M405a 02a | 0.018  | JSM M405a 5a | 0.075 |
| JSM M405a 3a  | 0.037  | JSM M405a 6a | 0.12  |

## HYDROGEN IN IRON AND STEEL

analysis listed in mass % except \* which is mg/kg (ppm)

| # | Number                 | H*    | C      | S      | O        | N      | Size         | Form                    | Comments             |
|---|------------------------|-------|--------|--------|----------|--------|--------------|-------------------------|----------------------|
| 1 | <u>502-978-0793</u>    | (7.8) | 0.0323 | 0.0026 | (0.0086) | 0.349  | 50 g         | 0.5 g pins              | <u>17034</u>         |
| 2 | SS-5-33                | 7.3   | .      | .      | .        | .      | 100 g        | 10 g rods               | 4 mm Ø x 100 mm each |
| 1 | 58A HP51012            | 7.2   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 1 | NCS NS11082            | 7.2   | .      | .      | .        | .      | 20 g         | 1 g pins                |                      |
| 1 | <u>502-963-0738</u>    | 6.9   | 0.0257 | 0.0090 | 0.0071   | 0.0485 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | DSZU CA013             | 6.8   | .      | .      | 0.0018   | 0.0102 | 50 g         | 1 g pins                | last of stock        |
| 1 | <u>502-855-0718</u>    | 6.7   | 0.0460 | 0.0126 | 0.0121   | 0.0673 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | CMSI 3012-3            | 6.5   | .      | .      | .        | .      | 40 g         | 2 g balls               |                      |
| 1 | NCS NS11080            | 6.4   | .      | .      | .        | .      | 20 g         | 1 g pins                |                      |
| 1 | <u>502-060-0737</u>    | 6.17  | .      | .      | .        | .      | 125 g        | 5 g pins                | <u>34, 17025</u>     |
| 1 | NCS NS20001a           | 6.00  | .      | .      | .        | .      | 20 g         | 1 g balls               |                      |
| 1 | JSS GS-7a              | 6.0   | .      | .      | .        | .      | 8 steel rods | 5 mm Ø x 230 mm         | last of stock        |
| 1 | <u>502-702-1000</u>    | (6)   | 0.342  | 0.0100 | 1.10     | 0.0079 | 100 g        | powder                  | <u>34, 17025</u>     |
| 1 | NCS NS11078            | 5.8   | .      | .      | 0.0031   | 0.031  | 50 g         | 1 g balls               |                      |
| 1 | 58A HP51011            | 5.8   | .      | .      | 0.0033   | 0.0305 | 50 g         | 1 g pins                |                      |
| 1 | <u>502-855-0718-1</u>  | (5.7) | 0.0454 | 0.0123 | 0.0109   | 0.0661 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | NM 503                 | 5.4   | .      | .      | .        | .      | 100 g        | 1 g pins                |                      |
| 1 | Y TSH001               | 4.6   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 1 | 58A HP51010            | 4.1   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 1 | NCS NS20042            | 3.55  | .      | .      | .        | .      | 20 g         | 1 g balls               |                      |
| 1 | <u>502-913-0720</u>    | 3.5   | 0.066  | 0.0049 | 0.0066   | 0.0557 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | 58A HP51009            | 2.9   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 1 | NCS NS11081            | 2.7   | .      | .      | .        | .      | 20 g         | 1 g pins                |                      |
| 1 | <u>502-928-0633</u>    | 2.6   | 0.0203 | 0.0193 | 0.0037   | 0.0736 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | <u>502-990-0792-11</u> | (2.4) | 0.172  | 0.0250 | 0.0053   | 0.0083 | 100g         | 1 g pins                | <u>34, 17025</u>     |
| 1 | <u>502-916-0773</u>    | (2.3) | 0.473  | 0.0247 | (0.0017) | 0.0068 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | <u>502-928-0634</u>    | 2.3   | 0.0194 | 0.0193 | 0.0036   | 0.0738 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | <u>502-935-0719</u>    | 2.2   | 0.062  | 0.0011 | 0.0028   | 0.0712 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | <u>502-928-0635</u>    | 2.2   | 0.0192 | 0.0192 | 0.0034   | 0.0737 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | 58A HP51008            | 2.2   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 1 | NCS NS11084            | 2.2   | .      | .      | .        | .      | 20 g         | 1 g pins                |                      |
| 1 | 58A NK51085            | 2.0   | .      | .      | 0.0025   | 0.058  | 50 g         | 1 g balls               |                      |
| 1 | JSS GS9-1              | 2.0   | .      | .      | .        | .      | 8 steel rods | 5 mm Ø x 230 mm ~ 280 g |                      |
| 1 | 58A HP51007            | 1.8   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 1 | NCS NS11077            | 1.8   | .      | .      | 0.0036   | 0.034  | 50 g         | 1 g balls               |                      |
| 1 | <u>502-990-0792</u>    | (1.6) | 0.172  | 0.0249 | 0.0048   | 0.0083 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | <u>502-712-1042</u>    | (1.6) | 0.0009 | 0.0007 | 0.0014   | 0.0023 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | 58A HP51006            | 1.6   | .      | .      | 0.0038   | 0.0330 | 50 g         | 1 g balls               |                      |
| 1 | NM 502                 | 1.5   | .      | .      | .        | .      | 100 g        | 1 g pins                |                      |
| 1 | <u>502-904-0566</u>    | (1.5) | 0.056  | 0.0179 | 0.0039   | 0.0923 | 100 g        | 0.5 g pins              | <u>34, 17025</u>     |
| 1 | 58A HP51005            | 1.3   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 1 | NCS NS11083            | 1.3   | .      | .      | .        | .      | 20 g         | 1 g pins                |                      |
| 1 | NCS NS20025b           | 1.1   | .      | .      | .        | .      | 20 g         | 1 g balls               |                      |
| 1 | DSZU CA011             | 1.1   | .      | .      | (0.002)  | 0.0074 | 50 g         | 1 g pins                | last of stock        |
| 1 | <u>502-893-0772</u>    | (1.0) | 0.796  | 0.0044 | 0.0013   | 0.0048 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | <u>BS HON-U</u>        | 1.0   | 0.050  | 0.0018 | 0.0023   | 0.0254 | 100 g        | 1 g balls               | <u>34, 17025</u>     |
| 1 | BAM CRM H1             | 0.97  | .      | .      | .        | .      | 100 g        | 1 g pins                |                      |
| 1 | 58A HP51004            | 0.9   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 2 | JSM M481-1             | 0.9   | .      | .      | .        | .      | 100 g        | 1 g balls               |                      |
| 1 | 58A HP51003            | 0.8   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 1 | NCS NS11079            | 0.7   | .      | .      | 0.0075   | 0.0049 | 50 g         | 1 g balls               |                      |
| 1 | <u>502-998-1000</u>    | (0.7) | 0.0114 | 0.0044 | 0.0319   | 0.0038 | 100 g        | 1 g pins                | <u>34, 17025</u>     |
| 1 | <u>502-863-1002</u>    | (0.5) | 0.0383 | 0.0067 | (0.0013) | 0.0042 | 100 g        | 1 g balls               | <u>34, 17025</u>     |
| 1 | 58A HP51002            | 0.5   | .      | .      | .        | .      | 50 g         | 1 g balls               |                      |
| 1 | NCS NS11043            | 0.5   | .      | .      | 0.0041   | 0.0381 | 50 g         | 1 g balls               |                      |

| # | Number | H* | C | S | O | N | Size | Form | Comments |
|---|--------|----|---|---|---|---|------|------|----------|
|---|--------|----|---|---|---|---|------|------|----------|

## CAST IRON CHIPS AND POWDER

# = class, where 1 = CRM and 2 = RM

| # | Number              | C%    | S%     | N%     | Units        | Comment          |
|---|---------------------|-------|--------|--------|--------------|------------------|
| 1 | NH M03              | 5.63  | 0.008  | .      | 150 g chips  |                  |
| 1 | <u>502-920-1003</u> | 4.82  | 0.019  | .      | 150 g powder | <u>34, 17025</u> |
| 1 | ECRM 490-1          | 4.813 | 0.0040 | 0.0030 | 100 g chips  |                  |
| 1 | CZ 2024B            | 4.40  | 0.047  | .      | 200 g chips  | <u>34, 17025</u> |
| 2 | DH E2502            | 4.230 | 0.0498 | .      | 50 g chips   |                  |
| 1 | GBW 01113C          | 4.11  | 0.054  | .      | 150 g chips  | last             |
| 1 | CZ 2023B            | 4.06  | 0.114  | .      | 200 g chips  | <u>34, 17025</u> |
| 1 | CZ 2023A            | 4.029 | 0.0886 | .      | 100 g chips  |                  |
| 1 | NCS HC93001         | 4.01  | 0.069  | .      | 100 g chips  |                  |
| 1 | NCS NS11057         | 3.98  | 0.079  | .      | 50 g chips   |                  |
| 1 | <u>502-919-1004</u> | 3.94  | 0.111  | .      | 150 g powder | <u>34, 17025</u> |
| 1 | CZ 2022B            | 3.86  | 0.085  | .      | 200 g chips  | <u>34, 17025</u> |
| 1 | CZ 2021B            | 3.80  | 0.043  | .      | 200 g chips  | <u>34, 17025</u> |
| 1 | NCS NS11058         | 3.76  | 0.022  | .      | 50 g chips   |                  |
| 1 | VS Ch11/4           | 3.61  | 0.0204 | .      | 100 g powder |                  |
| 1 | NCS NS16002         | 3.60  | 0.0186 | .      | 100 g chips  |                  |
| 1 | VS Ch10/4           | 3.59  | 0.085  | .      | 100 g powder |                  |
| 1 | CTIF FB20-2         | 3.557 | 0.0614 | .      | 100 g chips  |                  |
| 1 | CTIF FB20-1         | 3.552 | 0.059  | .      | 100 g chips  |                  |
| 1 | CZ 2020B            | 3.52  | 0.043  | .      | 200 g chips  | <u>34, 17025</u> |
| 1 | ECRM 485-3          | 3.514 | 0.1488 | 0.0081 | 100 g chips  |                  |
| 2 | TH 1023-3           | 3.45  | 0.0048 | .      | 100 g chips  |                  |
| 2 | TH 1050             | 3.424 | 0.143  | .      | 100 g chips  |                  |
| 1 | CZ 2019B            | 3.43  | 0.017  | .      | 200 g chips  | <u>34, 17025</u> |
| 1 | <u>502-899-1035</u> | 3.27  | 0.037  | .      | 100 g powder | <u>34, 17025</u> |
| 2 | HRT 530-033         | 3.33  | 0.011  | .      | 150 g powder |                  |
| 2 | HRT 530-033A        | 3.33  | 0.011  | .      | 1 kg powder  |                  |
| 1 | VS Ch8/4            | 3.3   | 0.01   | .      | 100 g powder |                  |
| 1 | ECRM 492-1          | 3.258 | 0.0854 | 0.0048 | 100 g chips  |                  |
| 1 | CZ 2018A            | 3.173 | 0.0142 | .      | 100 g chips  |                  |
| 1 | VS Ch22             | 3.16  | 0.106  | .      | 100 g powder |                  |
| 1 | CZ 2018B            | 3.07  | 0.014  | .      | 200 g chips  | <u>34, 17025</u> |
| 1 | CTIF FB 13          | 2.959 | 0.0973 | .      | 100 g chips  |                  |
| 1 | VS Ch9/6            | 2.94  | 0.095  | .      | 100 g powder |                  |
| 1 | NCS NS11060         | 2.93  | 0.101  | .      | 50 g chips   |                  |
| 1 | SRM 334             | 2.83  | 0.043  | .      | 150 g chips  |                  |
| 1 | CZ 2017B            | 2.57  | 0.095  | .      | 200 g chips  | <u>34, 17025</u> |
| 1 | NCS NS13001         | 2.51  | 0.020  | .      | 100 g chips  |                  |
| 1 | CZ 2017A            | 2.463 | 0.0755 | .      | 100 g chips  |                  |
| 1 | <u>502-698-1008</u> | 2.16  | 0.013  | .      | 150 g powder | <u>34, 17025</u> |
| 1 | CZ 2016B            | 2.15  | 0.0047 | .      | 200 g chips  | <u>34, 17025</u> |
| 1 | CTIF FB20           | 2.114 | 0.128  | .      | 100 g chips  |                  |
| 1 | CZ 2016A            | 2.053 | 0.0048 | .      | 100 g chips  |                  |
| 1 | NCS NS16001         | 2.02  | 0.0014 | .      | 100 g chips  | last             |
| 1 | CZ 2015A            | 1.996 | 0.0157 | .      | 100 g chips  |                  |
| 1 | CZ 2015B            | 1.99  | 0.017  | .      | 200 g chips  | <u>34, 17025</u> |
| 1 | NCS NS11059         | 1.95  | 0.143  | .      | 50 g chips   |                  |
| 1 | BS CE 216 *         | .     | 0.043  | .      | 150 g chips  |                  |
| 1 | BS CE 219 *         | .     | 0.038  | .      | 150 g chips  |                  |
| 1 | BS CE 217 *         | .     | 0.029  | .      | 150 g chips  |                  |

| # | Number | C% | S% | N% | Units | Comment |
|---|--------|----|----|----|-------|---------|
|---|--------|----|----|----|-------|---------|

## CRM ALUMINUM IN STEEL

analysis listed in mass % chips 150 g

| Number | Al | B | P | Si |
|--------|----|---|---|----|
|--------|----|---|---|----|

|           |        |   |   |   |
|-----------|--------|---|---|---|
| JSS 330-4 | 0.0063 | . | . | . |
|-----------|--------|---|---|---|

S, O, N, H, C IN NON-FERROUS METALS

# = class, where 1 = CRM and 2 = RM analysis listed in mg/kg 17025 = ISO Accreditation

| # | Number       | Material   | Carbon | Sulfur | Oxygen | Nitrogen | Hydrogen | Size & Form  |
|---|--------------|------------|--------|--------|--------|----------|----------|--|
| 1 | AA Alu-H2    | Aluminum   | .      | .      | .      | .        | 0.068    | 10 rods, 0.5" Ø x ~24"                                 |
| 1 | 58A CP54008  | Copper     | .      | 94     | .      | .        | .        | 50 g chips   |
| 1 | IMN Cu 90-1  | Copper     | .      | 83.7   | .      | .        | .        | 250 g chips  |
| 1 | 58A CP54006  | Copper     | .      | 64     | .      | .        | .        | 50 g chips   |
| 1 | 58A CP54005  | Copper     | .      | 53     | .      | .        | .        | 50 g chips   |
| 1 | IMN Cu 50-1  | Copper     | .      | 49.6   | .      | .        | .        | 250 g chips last                                       |
| 1 | 58A CP54007  | Copper     | .      | 27     | .      | .        | .        | 50 g chips   |
| 1 | IMN Cu S-20  | Copper     | .      | 23.1   | .      | .        | .        | 150 g chips  |
| 1 | SRM 885      | Copper     | Ag:5   | 18     | 310    | Pb:2     | .        | 200 g of 1 g pins Trace As, Bi, Fe, Ni, Sb, Sn, and Zn |
| 1 | 58A CP54004  | Copper     | .      | 13     | .      | .        | .        | 50 g chips   |
| 1 | 502-937-0752 | Copper     | .      | 11.6   | .      | .        | .        | 100 g of 1 g pins 17034                                |
| 1 | 502-937-0753 | Copper     | .      | 11.5   | .      | .        | .        | 100 g of 1 g pins 17034                                |
| 1 | 502-937-0754 | Copper     | .      | 11.5   | .      | .        | .        | 100 g of 1 g pins 17034                                |
| 1 | 502-937-0751 | Copper     | .      | 11.4   | .      | .        | .        | 100 g of 1 g pins 17034                                |
| 1 | IMN CuS-L    | Copper     | .      | 4.24   | .      | .        | .        | 150 g chips  |
| 1 | IMN Cu 600/1 | Copper     | .      | .      | 581    | .        | .        | 220 g of rods 6 mm Ø x 105 mm                          |
| 1 | NCS NS11035  | Copper     | .      | .      | 479    | .        | .        | 25 g of 1 g pins                                       |
| 1 | BCR 058      | Copper     | .      | .      | 390    | .        | .        | rod, 7 mm Ø x 50 mm                                    |
| 2 | BAM 379/3    | Copper     | .      | .      | 378    | .        | .        | disc, 40 mm Ø x 30 mm                                  |
| 1 | NCS NS11038  | Copper     | .      | .      | 376    | .        | .        | 25 g of 1 g pins                                       |
| 2 | BAM 379/2    | Copper     | .      | .      | 212    | .        | .        | disc, 40 mm Ø x 30 mm                                  |
| 1 | NCS NS11036  | Copper     | .      | .      | 208    | .        | .        | 25 g of 1 g pins                                       |
| 1 | IMN Cu 100/5 | Copper     | .      | .      | 163.7  | .        | .        | 200 g of rod 20 mm Ø x 100 mm                          |
| 1 | DSZU CA023   | Copper     | .      | .      | 158    | (2.1)    | .        | 50 g of 0.5 g pins                                     |
| 1 | BCR 022A     | Copper     | .      | .      | 138    | .        | .        | disc, 26 mm Ø x 9 mm                                   |
| 1 | BCR 022B     | Copper     | .      | .      | 138    | .        | .        | rod, 9 mm Ø x 50 mm                                    |
| 1 | NCS NS11033  | Copper     | .      | .      | 135    | .        | .        | 25 g of 1 g pins                                       |
| 1 | IMN Cu 100   | Copper     | .      | .      | 123    | .        | .        | 150 g of rod 5 mm Ø x 100 mm                           |
| 2 | BAM 379/1    | Copper     | .      | .      | 38     | .        | .        | disc, 40 mm Ø x 30 mm                                  |
| 1 | NCS NS11032  | Copper     | .      | .      | 18     | .        | .        | 25 g of 1 g pins                                       |
| 1 | NCS NS11031  | Copper     | .      | .      | 10     | .        | .        | 25 g of 1 g pins                                       |
| 1 | DSZU CA021   | Copper     | .      | .      | 7.4    | (1.9)    | .        | 50 g of 1 g pins                                       |
| 1 | IMN Cu 10/1  | Copper     | .      | .      | 3.8    | .        | .        | 150 g of rod 6 mm Ø x 110 mm                           |
| 1 | 501-953-0648 | Copper     | .      | .      | 3.2    | .        | .        | 100 g of 1 g pins 17025                                |
| 1 | NCS NS11030  | Copper     | .      | .      | 2.8    | .        | .        | rod, 6 mm Ø x 110 mm                                   |
| 1 | IMN Cu 10    | Copper     | .      | .      | 2.1    | .        | .        | 150 g of rod 5 mm Ø x 100 mm                           |
| 1 | BCR 054R     | Copper     | .      | .      | 0.47   | .        | .        | rod, 7 mm Ø x 50 mm                                    |
| 1 | IMN Ni-2     | Nickel     | 128    | 149    | .      | .        | .        | 100 g chips last of stock                              |
| 1 | SRM 861      | Nickel     | .      | 0.561  | .      | .        | .        | 50 g chips   |
| 1 | 58A HC51001  | Nickel     | .      | .      | 20     | 51       | .        | 20 g cube 4mm x 4mm x 5mm                              |
| 1 | 58A HC52001  | Nickel     | .      | .      | 10     | 6.3      | .        | 20 g cube 4mm x 4mm x 5mm                              |
| 2 | 502-411-0699 | Nickel     | .      | .      | 2.4    | .        | .        | 100 g of 1 g pins                                      |
| 1 | IMN Ag10/1   | Silver     | .      | .      | 11     | .        | .        | 2 rods, 6 mm Ø x 100 mm                                |
| 1 | BCR 275      | Zircaloy-4 | 113    | .      | 1670   | 39.0     | .        | 10 pcs 13 mm Ø x 1 mm each                             |
| 1 | BCR 276      | Zircaloy-4 | 108    | .      | 1540   | 41       | .        | 100 pcs 4.5 mm Ø x 2 mm each                           |
| 1 | 502-890-0747 | Zirconium  | 145    | .      | 0.141% | 20       | 9.1      | 200 pieces of of 0.12 g pins 17025                     |

| # | Number | Material | Carbon | Sulfur | Oxygen | Nitrogen | Hydrogen | Size & Form |
|---|--------|----------|--------|--------|--------|----------|----------|-------------|
|---|--------|----------|--------|--------|--------|----------|----------|-------------|

**CRM COPPER PINS** analysis listed in mg/kg 50g of 0.31g pins

| Number  | Ag   | As   | Bi   | Cd     | Co   | Cr   | Fe   | Mn   | Ni   | Pb   | S    | Sb  | Se   | Sn   | Te   | Zn   |
|---------|------|------|------|--------|------|------|------|------|------|------|------|-----|------|------|------|------|
| IMN 001 | 27.1 | 3.13 | 1.39 | (0.11) | 2.09 | 3.53 | 13.9 | 5.16 | 3.64 | 4.02 | 5.99 | 2.4 | 1.34 | 3.39 | 1.23 | 4.57 |

**RM PURITY NICKEL POWDER** certified analysis listed in mg/kg, no uncertainties informational values 100 g units

| Number   | Al | C   | Cr | Cu | Fe  | Mn | Mo | O    | P | Pb  | S | Si | Ag   | As   | B  | Ba | Be | Bi   | Ca | Cd   | Co | Ga   | H  | In   | Mg | N  | Na | Sb   | Se   | Sn | Te   | Ti | Tl   | V  | Zn |
|----------|----|-----|----|----|-----|----|----|------|---|-----|---|----|------|------|----|----|----|------|----|------|----|------|----|------|----|----|----|------|------|----|------|----|------|----|----|
| BS HPN-1 | 70 | 268 | 22 | 2  | 202 | 2  | 3  | 1850 | 5 | 0.2 | 4 | 6  | <0.1 | <0.5 | <2 | <1 | <1 | <0.2 | 3  | <0.1 | <2 | <0.5 | 99 | <0.2 | 1  | 27 | 4  | <0.1 | <0.2 | <1 | <0.2 | <1 | <0.1 | <1 | <1 |

## CRM TITANIUM

analysis listed in mass %

| Number                                      | H         | C     | N      | O      | S        | Units                                |
|---|-----------|-------|--------|--------|----------|--------------------------------------|
| NCS NS11093                                 | 0.027     | .     | 0.0097 | 0.144  | .        | 5 Rods 2 x 2 x 120 mm                |
| SRM 2454                                    | 0.0211    | .     | .      | .      | .        | 10 g chips                           |
| SRM 2453a                                   | 0.01268   | .     | .      | .      | .        | 10 g of 0.1 g pins                   |
| NCS NS11091                                 | 0.012     | .     | 0.0095 | 0.070  | .        | 5 Rods 2 x 2 x 120 mm                |
| SRM 2453                                    | 0.0114    | .     | .      | .      | .        | 10 g chips last                      |
| <b>502-891-0749</b>                         | 0.0103    | 0.011 | 0.010  | 0.121  | .        | 20 g of 0.1 g pins <b>17034</b>      |
| NCS NS11092                                 | 0.0097    | .     | 0.030  | 0.130  | .        | 5 Rods 2 x 2 x 120 mm                |
| <b>503-507-0797</b>                         | 0.0079    | 0.005 | 0.013  | 0.162  | .        | 24 g of 0.12 g pins <b>17034</b>     |
| SRM 2452                                    | 0.00559   | .     | .      | .      | .        | 10 g chips                           |
| IARM 345A                                   | 0.0040    | 0.010 | 0.0025 | 0.120  | (0.001)  | 65 g chips                           |
| DSZU CA017                                  | 0.0039    | .     | 0.0061 | 0.151  | .        | 10 g of 0.1 g pins                   |
| <b>503-511-0800</b>                         | 0.0035    | 0.049 | 0.005  | 0.365  | .        | 24 g of 0.12 g pins <b>17034</b>     |
| NCS NS11107                                 | 0.0035    | .     | 0.018  | 0.113  | .        | 100 x 0.15 g pins                    |
| IARM 336B                                   | 0.0029    | 0.006 | 0.0016 | 0.101  | (0.002)  | 65 g chips                           |
| <b>502-867-0739-3</b>                       | (0.00247) | 0.022 | 0.0126 | 0.144  | .        | 20 g of 0.1 g pins <b>17025, 34</b>  |
| <b>503-504-0796</b>                         | (0.0024)  | 0.004 | 0.0024 | 0.070  | .        | 24 g of 0.12 g pins <b>17034</b>     |
| IARM 261A                                   | 0.0023    | 0.007 | 0.007  | 0.10   | (0.001)  | 65 g chips last                      |
| IARM 336A                                   | 0.0022    | 0.005 | 0.0015 | 0.102  | (0.002)  | 65 g chips                           |
| DSZU CA015A                                 | 0.0018    | .     | 0.007  | 0.070  | .        | 10 g of 0.1 g pins                   |
| IARM 300A                                   | 0.0018    | 0.007 | 0.0033 | 0.162  | 0.0008   | 65 g chips                           |
| NCS NS11090                                 | 0.0017    | .     | 0.0034 | 0.285  | .        | 5 Rods 2 x 2 x 120 mm                |
| DSZU CA019                                  | 0.0016    | .     | 0.010  | 0.24   | .        | 10 g of 0.1 g pins                   |
| IARM 280A                                   | 0.0015    | 0.005 | 0.0014 | 0.19   | (0.001)  | 65 g chips                           |
| DSZU CA018                                  | 0.0015    | .     | 0.0130 | 0.058  | .        | 10 g of 0.1 g pins last              |
| <b>502-947-0740</b>                         | 0.0014    | 0.022 | 0.013  | 0.144  | .        | 12 g of 0.12 g pins <b>17025, 34</b> |
| NCS NS11089                                 | 0.0014    | .     | 0.0050 | 0.045  | .        | 5 Rods 2 x 2 x 120 mm                |
| NCS NS11108                                 | 0.0014    | .     | 0.0030 | 0.099  | .        | 100 x 0.15 g pins                    |
| IARM 261C                                   | 0.001     | 0.011 | 0.005  | 0.085  | (0.001)  | 65 g chips                           |
| IARM 261B                                   | (0.001)   | 0.011 | 0.004  | 0.083  | (0.0004) | 65 g chips                           |
| IARM 261E                                   | (0.0005)  | 0.012 | 0.006  | 0.084  | (0.001)  | 65 g chips                           |
| IARM 261D                                   | (0.0005)  | 0.011 | 0.0051 | 0.083  | (0.001)  | 65 g chips                           |
| <b>502-969-0606</b>                         | .         | 0.012 | .      | .      | .        | 25 g of 0.25 g pins <b>17025, 34</b> |
| BCR 059B                                    | .         | .     | 0.0172 | 0.1750 | .        | 25 units of 0.2 g cubes              |
| BCR 059A                                    | .         | .     | 0.0172 | 0.1750 | .        | disc, 26 mm Ø x 9 mm                 |
| 58A HCS3003                                 | .         | .     | 0.014  | 0.124  | .        | ~10 g rods 3 pcs 1.5 x 100 mm        |
| BCR 024B                                    | .         | .     | 0.0117 | 0.0608 | .        | 25 0.4 g cubes                       |
| BCR 024C                                    | .         | .     | 0.0117 | 0.0608 | .        | 25 0.2 g cubes                       |
| NCS NS57102                                 | .         | .     | 0.007  | 0.073  | .        | 10 g of 0.1 g pins last              |
| <b>BELOW ITEMS ARE SET ONLY, AS GROUPED</b> |           |       |        |        |          |                                      |
| NCS NS20043-4                               | 0.00295   | .     | 0.0089 | 0.16   | .        | Rod 100 x 3 x 2 mm                   |
| NCS NS20043-1                               | 0.0018    | .     | 0.014  | 0.18   | .        | Rod 100 x 3 x 2 mm                   |
| NCS NS20043-2                               | 0.0014    | .     | 0.018  | 0.31   | .        | Rod 100 x 3 x 2 mm                   |
| NCS NS20043-3                               | 0.0010    | .     | 0.0093 | 0.13   | .        | Rod 100 x 3 x 2 mm                   |

| Number | H | C | N | O | S | Units |
|--------|---|---|---|---|---|-------|
|--------|---|---|---|---|---|-------|

## INORGANIC MATERIALS

# = class, where 1 = CRM and 2 = RM analysis listed in mass % except \* which is mg/kg (ppm)

| # | Number              | Material and Units               | C     | S    | O       | N            | Hg*      | Heat           |
|---|---------------------|----------------------------------|-------|------|---------|--------------|----------|----------------|
| 1 | NCS NS51001a        | Tungsten Carbide powder 100g     | 6.118 | .    | .       | .            | .        | .              |
| 1 | <b>502-905-1002</b> | Synthetic Carbon 50g powder      | 5.00  | .    | .       | .            | .        | <b>17034</b>   |
| 1 | <b>502-987-1000</b> | Fly Ash 20g                      | 1.25  | 1.30 | .       | .            | .        | <b>17025</b>   |
| 1 | <b>502-696-1003</b> | Synthetic Carbon 50g powder      | 1.03  | .    | .       | .            | .        | <b>17025</b>   |
| 1 | <b>502-914-1002</b> | Synthetic Carbon 50g powder      | 0.99  | 0.98 | .       | .            | .        | <b>17034</b>   |
| 1 | <b>502-914-1003</b> | Synthetic Carbon 50g powder      | 0.99  | 0.97 | .       | .            | .        | <b>17034</b>   |
| 1 | <b>502-699-1001</b> | Zinc Sulfide 50g powder          | .     | 32.7 | .       | .            | .        | <b>17025</b>   |
| 2 | <b>502-139-1009</b> | Silicon Dioxide powder 10g       | .     | .    | 53.2    | .            | .        | <b>17025</b>   |
| 1 | <b>502-141-1031</b> | Tungsten Oxide powder 10g        | .     | .    | 20.7    | .            | .        | <b>17025</b>   |
| 1 | BCR 102             | Tungsten Carbide 2 to 3 grams    | .     | .    | 0.0185  | .            | .        | .              |
| 1 | <b>502-908-1000</b> | Zirconium Dioxide 10g powder     | .     | .    | 0.00258 | .            | .        | <b>17025</b>   |
| 1 | COCO BA001          | Benzoic Acid 100g of 1g tablets  | .     | .    | .       | .            | 26,450 J | and 11,371 BTU |
| 1 | SABS CRM100         | Benzoic Acid 100g of 1g tablets  | .     | .    | .       | .            | .        | 26,448.0 J     |
| 2 | BCS 190v            | Benzoic Acid 100g of 1g tablets  | .     | .    | .       | .            | .        | 26,443.2 J     |
| 2 | BCS 190t            | Benzoic Acid 100g crystals       | .     | .    | .       | .            | .        | 26,439.7 J     |
| 2 | BCS 190t tabs       | Benzoic Acid 20g of 0.2g tablets | .     | .    | .       | .            | .        | 26,439.7 J     |
| 1 | SRM 39J             | Benzoic Acid 30g powder          | .     | .    | .       | .            | .        | 26,434 J       |
| 1 | <b>502-892-1001</b> | Benzoic Acid 70g of 1g tablets   | .     | .    | .       | <b>17025</b> | .        | 11,371 BTU     |
| 2 | 621-606-245-1032    | Benzoic Acid 50g of 0.6g tablets | .     | .    | .       | .            | .        | 11,371 BTU     |

UNDERLINED = ISO 17025 Accreditation

LECO COAL and COKE - see our INDUSTRIAL MATERIALS CATALOG

<http://www.brammerstandard.com/pdf/industrial.pdf>

## CRM REFRACTORY SET

available in set/6 only

| Number    | S     | Units |
|-----------|-------|-------|
| JRRM 1101 | 0.106 | 40 g  |
| JRRM 1102 | 0.293 | 40 g  |
| JRRM 1103 | 1.02  | 40 g  |
| JRRM 1104 | 1.48  | 40 g  |
| JRRM 1105 | 2.89  | 40 g  |
| JRRM 1106 | 4.93  | 40 g  |

## ORGANIC COMBUSTION SAMPLES

RM unless otherwise noted, 501-/502- CRM are 17025 or 17034

analysis listed in mass %

| Part Number      | Material and Units          | C     | S       | O     | N      | H    |
|------------------|-----------------------------|-------|---------|-------|--------|------|
| 502-634-1000     | GRAPHITE 50g                | 100.0 | .       | .     | .      | .    |
| 502-897-1003     | BBOT 25g (CRM)              | 72.56 | 7.46    | .     | 6.50   | 6.14 |
| 502-695-1000     | ACETANILIDE 10g (CRM)       | 71.01 | .       | .     | 10.36  | 6.75 |
| 502-184-1004     | BENZOIC ACID 10g            | 68.85 | .       | 26.20 | .      | 4.95 |
| 502-642-1016     | PHENYLALANINE 50g (CRM)     | 65.38 | .       | .     | 8.45   | 6.73 |
| 502-688-1003     | NICOTONIC ACID 25g (CRM)    | 58.57 | .       | .     | 11.40  | 4.12 |
| 502-932-1000     | CORN GLUTEN 50g (CRM)       | 52.12 | 0.98    | .     | 11.05  | 7.06 |
| 502-657-1001     | SULFAMETHAZINE 25g (CRM)    | 51.65 | 11.60   | .     | 20.11  | 5.10 |
| 502-931-1000     | ORCHARD LEAVES 20g (CRM)    | 49.54 | 0.442   | .     | 2.31   | 6.24 |
| 502-690-1000     | CAFFEINE 25g                | 49.48 | .       | .     | 28.85  | 5.19 |
| 502-205-1020     | CAFFEINE 5g                 | 49.48 | .       | .     | 28.85  | 5.19 |
| 502-082-1018A    | TOBACCO LEAVES 20g (CRM)    | 47.13 | 0.44    | .     | 2.50   | .    |
| 502-692-1002     | WHEAT FLOUR 50g (CRM)       | 45.24 | 0.194   | .     | 2.88   | 6.51 |
| 502-907-1001     | RICE FLOUR 50g (CRM)        | 44.53 | 0.110   | .     | 1.35   | .    |
| 501-441          | SUCROSE 50g                 | 42.10 | .       | 51.42 | .      | 6.48 |
| 502-896-1000     | EDTA 50g (CRM)              | 41.03 | .       | .     | 9.56   | 5.52 |
| 502-896-250-1000 | EDTA 250g (CRM)             | 41.03 | .       | .     | 9.56   | 5.52 |
| 502-911-1001     | GLYCINE 50g (CRM)           | 31.95 | .       | .     | 18.67  | 6.71 |
| 502-691-1000     | CYSTINE 25g (CRM)           | 29.97 | 26.62   | .     | 11.62  | 5.04 |
| 502-814-1002     | SOIL 25g                    | 22.6  | 0.323   | .     | 1.93   | .    |
| 502-694-1002     | SOIL 65g (CRM)              | 13.50 | 0.201   | .     | 1.13   | .    |
| 502-902-1002     | CALCIUM CARBONATE 50g (CRM) | 12.01 | .       | .     | .      | .    |
| 502-697-1001     | SOIL 65g (CRM)              | 3.79  | 0.045   | .     | 0.328  | .    |
| JSM M454-1       | GRAIN 150g                  | 3.73  | 0.0298  | .     | .      | .    |
| 503-502-1000     | SOIL 65g (CRM)              | 3.45  | 4.20    | .     | .      | .    |
| JSM M453-1       | GRAIN 150g                  | 3.20  | 0.0136  | .     | .      | .    |
| JSM M452-1       | GRAIN 150g                  | 2.78  | 0.0110  | .     | .      | .    |
| 502-933-1000     | ORE TAILINGS 25g (CRM)      | 2.16  | 0.74    | .     | .      | .    |
| 503-506-1000     | SOIL 65g (CRM)              | 2.07  | 0.42    | .     | .      | .    |
| JSM M451-1       | GRAIN 150g                  | 0.93  | 0.0096  | .     | .      | .    |
| 502-962-1000     | SOIL 65g (CRM)              | 0.717 | .       | .     | 0.101  | .    |
| 502-635-1000     | ORE TAILINGS 25g            | 0.55  | 45.0    | .     | .      | .    |
| 502-934-1000     | SYNTHETIC CARBON 50g (CRM)  | 0.54  | .       | .     | .      | .    |
| JK 47A           | IRON ORE 35g (CRM)          | 0.370 | (0.009) | 0.69  | 0.0062 | .    |
| 502-909-1001     | ORE TAILINGS 25g (CRM)      | 0.18  | 0.68    | .     | .      | .    |
| 502-909-1002     | ORE TAILINGS 25g (CRM)      | 0.18  | 0.67    | .     | .      | .    |
| 502-950-1001     | SYNTHETIC 50g (CRM)         | 0.12  | .       | .     | .      | .    |
| 503-503-1000     | SOIL 65g (CRM)              | 0.11  | 0.86    | .     | .      | .    |
| 502-964-1000     | SYNTHETIC 50g (CRM)         | 0.11  | 0.10    | .     | .      | .    |
| 502-927-1004     | IRON III OXIDE 10g (CRM)    | .     | .       | 30.4  | .      | .    |
| 502-906-1001     | BARLEY FLOUR 50g (CRM)      | .     | .       | .     | 1.98   | .    |
| 502-713-1000     | CORN FLOUR 50g (CRM)        | .     | .       | .     | 1.14   | .    |
| 502-912-1000     | CORN STARCH 150g (CRM)      | .     | .       | .     | 0.0755 | .    |

| Part Number | Material and Units | C | S | O | N | H |
|-------------|--------------------|---|---|---|---|---|
|-------------|--------------------|---|---|---|---|---|

**CRM**      **CALCIUM OXALATE**      17025      50 g units

| Part Number         | Temp   | % Loss                | Temp   | % Loss  | Temp   | % Loss               |
|---------------------|--------|-----------------------|--------|---------|--------|----------------------|
| <u>502-926-1003</u> | 200° C | 12.3 H <sub>2</sub> O | 450° C | 19.2 CO | 850° C | 30.0 CO <sub>2</sub> |