Creating graphs in OriginPro 9.1
Semestral work

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1 Multigraphs

1.1 Multiple-Line Graph

Figure 1a $^{13}$C CP/MAS NMR spectra of (a) oxidized cellulose and (b) oxidized cellulose modified with Ag salt.

Figure 1b Atomic (black solid lines) and background (red dotted lines) absorbance signals for 200 pg of Pb in presence of (a) 200 µg MgCl₂, (b) 200 µg MgCl₂ + 200 µg NH₄F, (c) 200 µg NH₄F, and under (d) matrix and modifier free conditions.

2 Line Connected Graphs

Figure 2 X-ray diffractogram of oxidized cellulose modified with Ag salt.

3 3D Graphs

3.1 Wire Plot

Figure 3a Response surface for the effects of extraction time and mass of the extractant on arsenic microwave-assisted extraction from Fine Fly Ash CTA-FFA-1 certified reference material.
3.2 Color Map Surface and Contour Graph

Figure 3b Energy spectrum obtained upon high-resolution continuum source graphite furnace atomic absorption spectrometry (HR-CS-GFAAS) monitoring of an aqueous solution of 20 pg Cr.
3.3 Waterfall Plot

Figure 3c ELSD-HPLC profiles of (1) MEB and (4) BHI background and those of OC/Ag(I) partially solubilized with these media and after incubation with (2) C. albicans, (3) A. fumigatis, (5) P. aeruginosa and (6) S. epidermidis for 7 days.

Figure 4 FTIR spectra of (A) control OC/Ag(I) sample (red) and those submitted to a 7 day incubation with (B) *A. fumigatus* (MEB, pH = 5.4) (black), (C) *C. albicans* (MEB, pH = 5.4) (green), (D) *P. aeruginosa* (BHI, pH = 7.0) (blue) and (E) *S. epidermidis* (BHI, pH = 7.0) (cyan) in the region 2000-800 cm\(^{-1}\).

5 Multiple Layers with Linked Axis

Figure 5 Recovery rates for Zn, Mg, Cu and Pb determination in samples with polyimide (1), epoxide (2), liquid rubber (3) and Lukosil (4) polymeric matrix for sample masses within the range of 5–10 mg (red columns) and 100–200 mg (blue columns). The Recovery is defined as: Recovery = Concentration of individual element found by the proposed method/Concentration declared by the producer. Bars indicate the range for each determination. The values of individual metal oxides in IPs samples declared by producer were: 7.5 % of PbO, 11.25 % of ZnO, 15 % of MgO and 3.75 % of Cu.

6 Multiple Y Axes Graph

Figure 6 Influence of FeCl$_3$ and AlCl$_3$ matrix on the relative absorbance signal (red and black lines) and background absorbance (green and blue lines) of 500 pg of Sn in the presence of 4 µg Pd + 1000 µg CA + 1000 µg NH$_4$F (■) and under modifier free conditions (▲). The relative absorbance is defined as: integrated absorbance of 500 pg Sn in the presence of chemical modifier and Cl$^-$ or Al within the investigated range/integrated absorbance of 500 pg Sn. Bars indicate the range for each determination (n = 3).

7 Ternary Contour Plot

Figure 7 Influence of the composition of the chemical modifier mixture, particularly the proportion of Modifier 1, Modifier 2 and Modifier 3, on the analytical recovery (%) of Sn determination in aqua regia soils extracts.
8 Gadgets

8.1 Integration Gadget

Figure 8a TOF-ICP-MS mass spectra for the analysis of Ca\(^{2+}\) (chloride) without (blue line) and with (red line) the employment of optimal amount of oxalic acid for matrix modification at mass of 75 and 77, reflecting the elimination of interference from \(^{40}\text{Ca}^{35}\text{Cl}^+\) and \(^{40}\text{Ca}^{37}\text{Cl}^+\) species onto the determination of As, respectively Se.

8.2 Interpolate Gadget and Quick Peaks Gadget

Figure 8b Atomic absorbance signals for 200 pg of Pb without (A) and with the presence of 200 µg NH₄F (B).

9 Statistics

9.1 Box Chart

Figure 9a Box plot comparison of element concentration with the standardized data and variation for 6 elements in the 21 infant formula samples analyzed. The upper and bottom extremities of each box represent the 25th and 75th percentile values, respectively. The transverse line and dot in each box represent the median and mean, respectively.
9.2 Scatter Matrix

Figure 9b Matrix scatterplots with histograms for the mercury content (µg kg\(^{-1}\)) analyzed in liver, rib and fat tissues of European otters (n = 93).