Electronic Supplementary Material (ESI) for RSC Advances.

Supporting information

Cobalt(II)/nickel(II) separation from sulfate media by solvent extraction with an undiluted quaternary phosphonium ionic liquid

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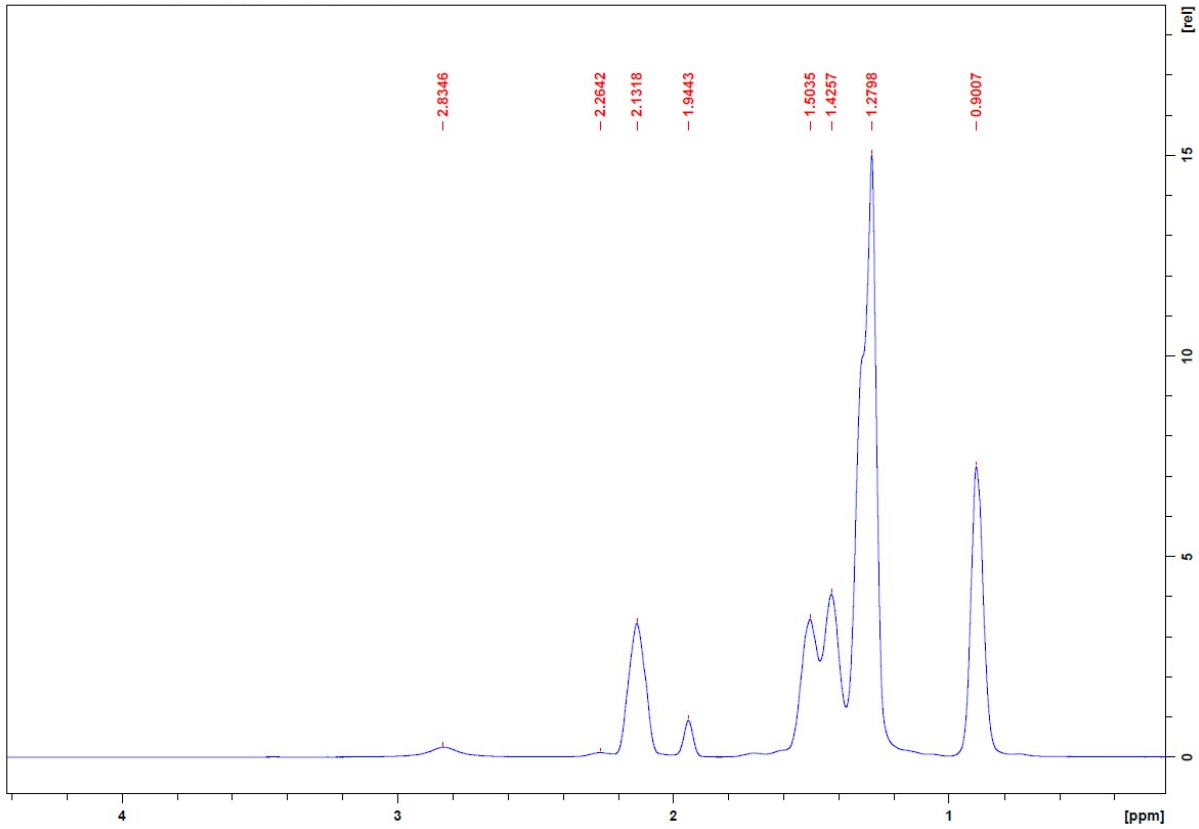

Figure S1 : ^{1}H NMR spectrum of commercial Cyphos IL 101.

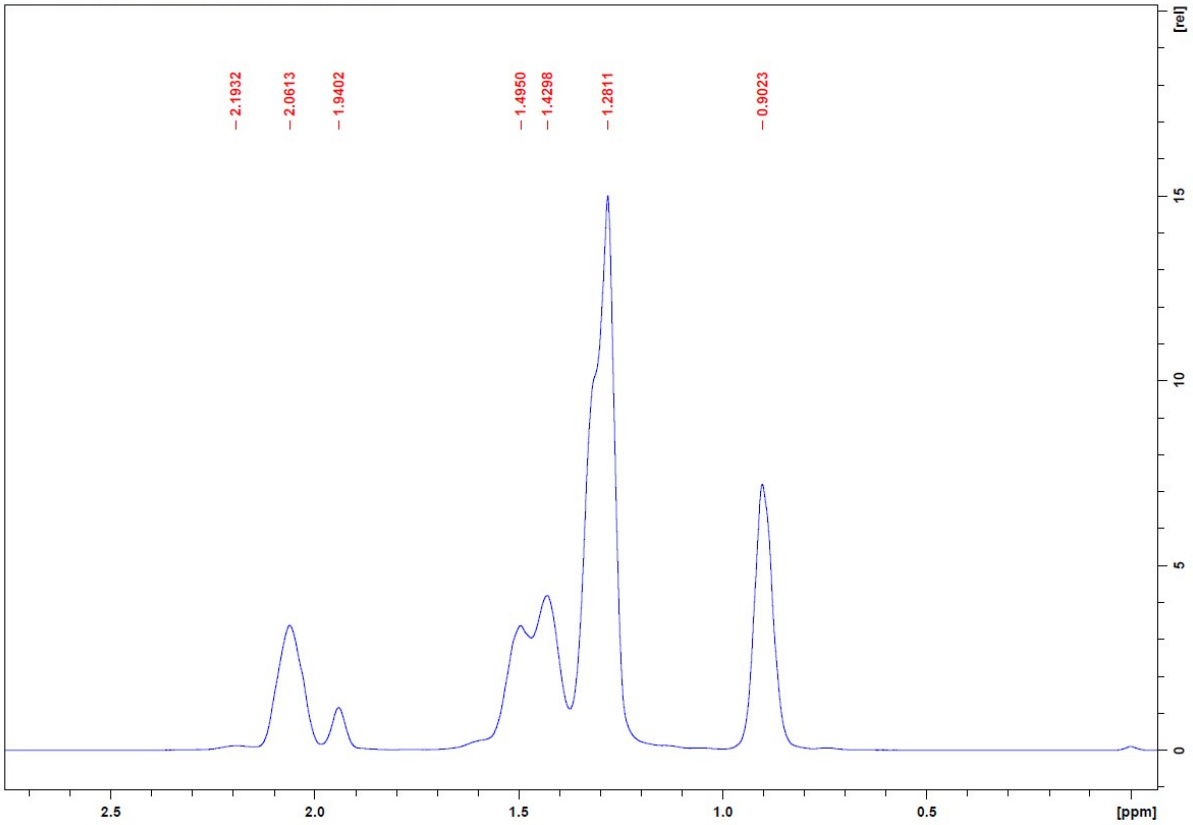

Figure S2 : ^{1}H NMR spectrum of the ionic liquid phase (Cyphos IL 101) after extraction. Initial aqueous phase: $[Ni]_{aq,in}$ = 0.5 g·L^{-1}, $[Co]_{aq,in}$ = 0.5 g·L^{-1}, $[(NH_4)_2SO_4]_{aq,in}$ = 3 M, $[H_2SO_4]_{aq,in}$ = 4 M. A/O = 1:1, $T_{shaking}$ = 25 °C.

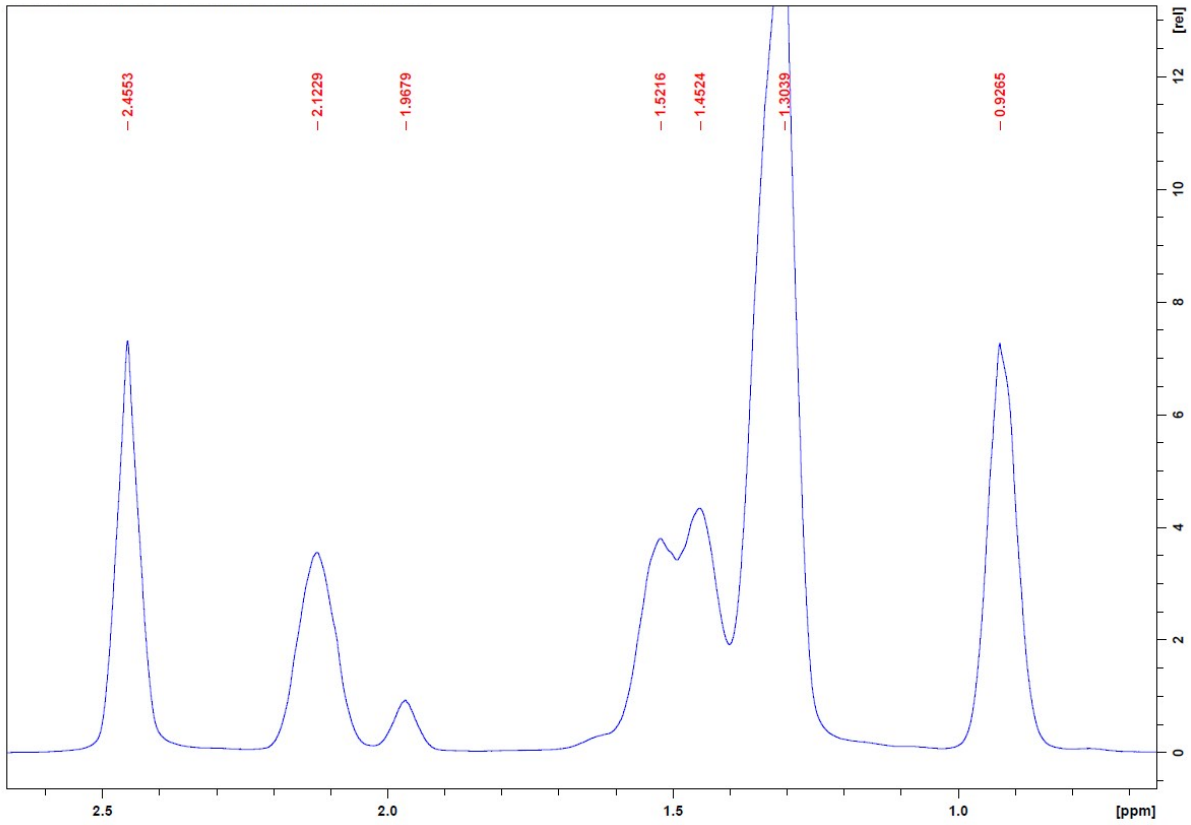

Figure S3 : ^{1}H NMR spectrum of the ionic liquid phase (Cyphos IL 101) after regeneration and neutralisation.

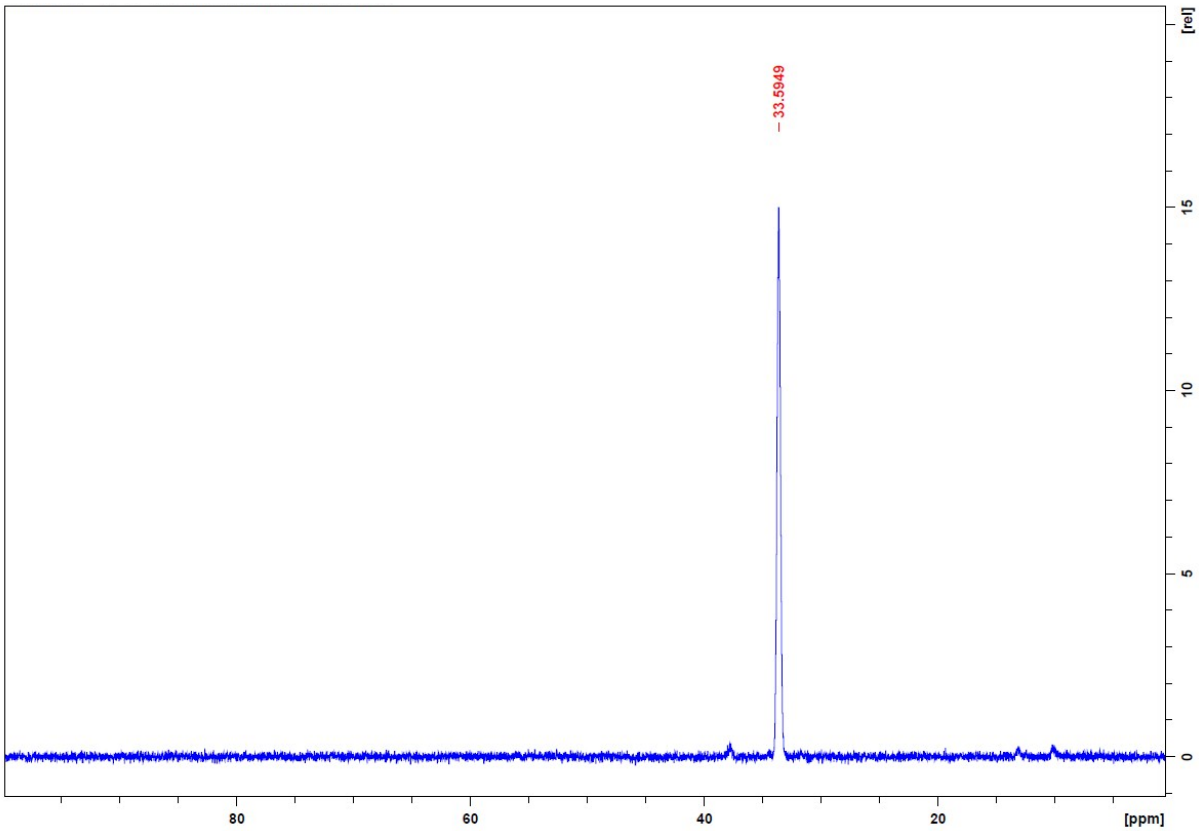

Figure S4 : ^{31}P NMR spectrum of commercial Cyphos IL 101.

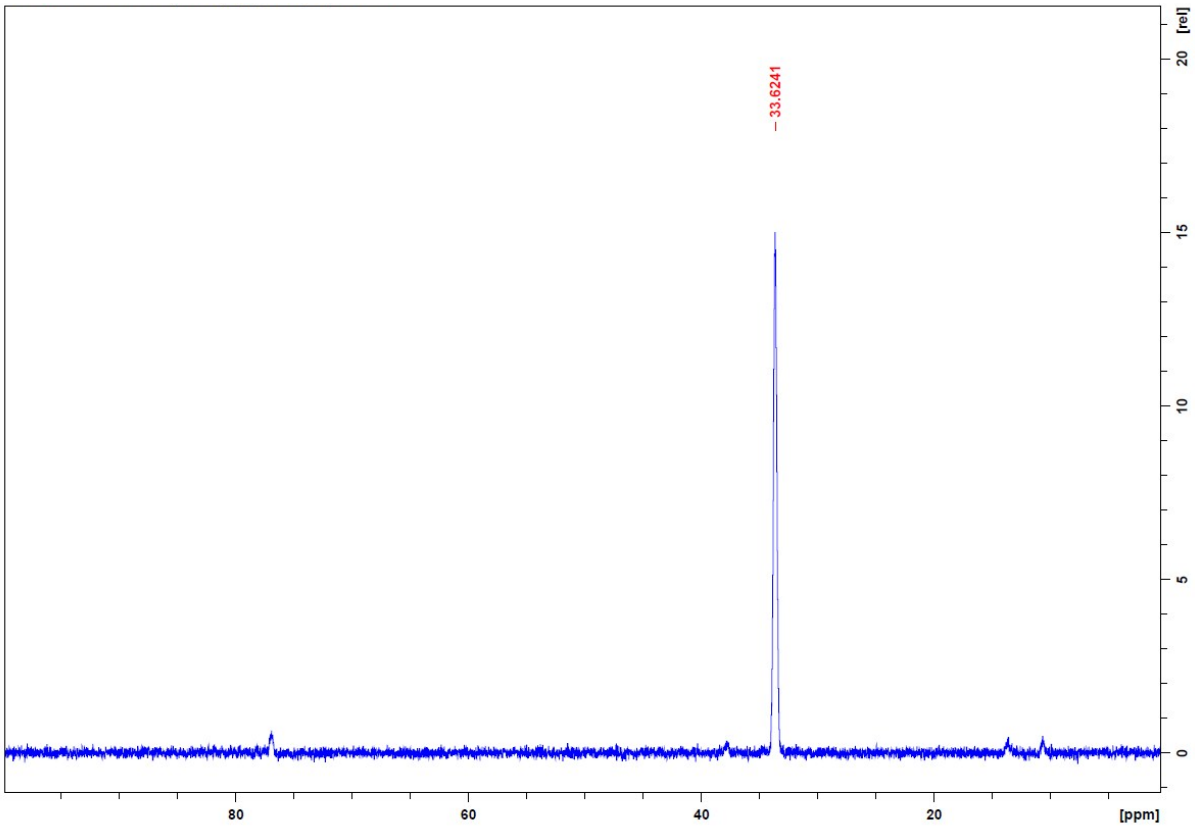

Figure S5 : ^{31}P NMR spectrum of the ionic liquid phase (Cyphos IL 101) after extraction. Initial aqueous phase: $[Ni]_{aq,in}$ = 0.5 g·L^{-1}, $[Co]_{aq,in}$ = 0.5 g·L^{-1}, $[(NH_4)_2SO_4]_{aq,in}$ = 3 M, $[H_2SO_4]_{aq,in}$ = 4 M. A/O = 1:1, $T_{shaking}$ = 25 °C.

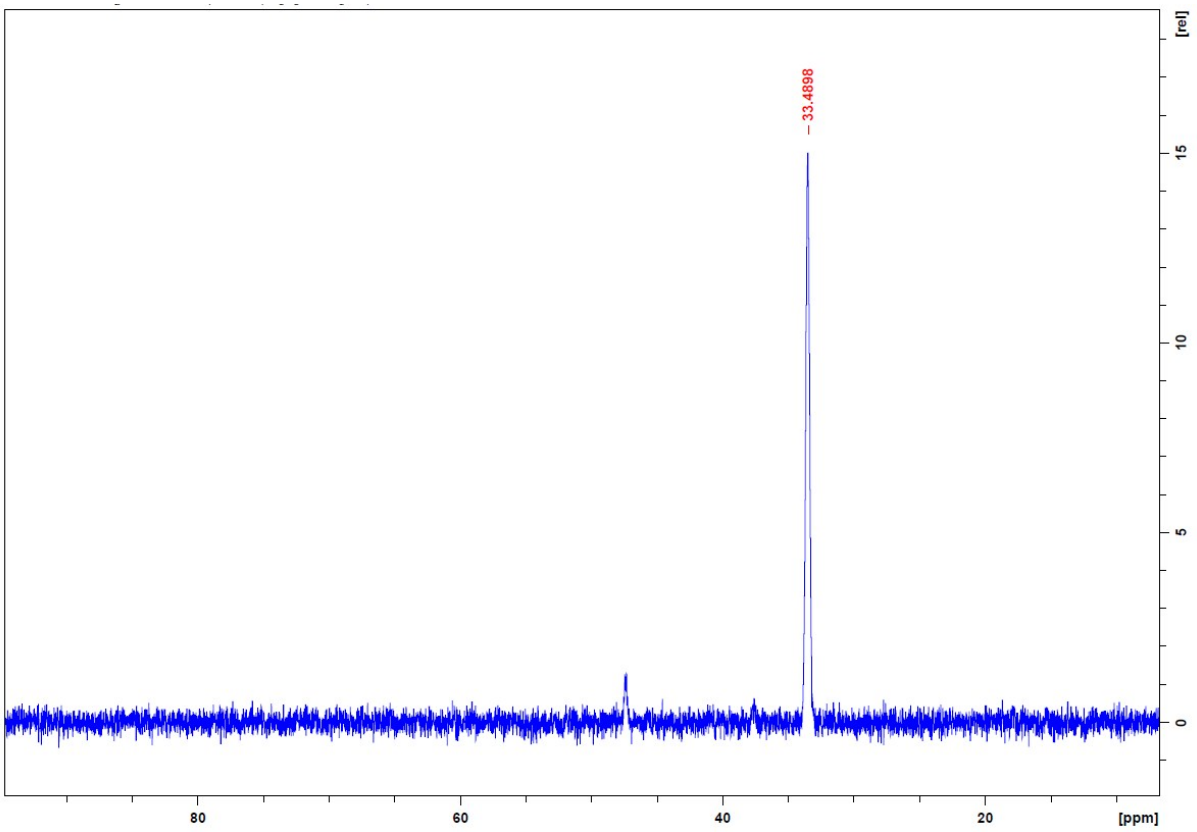

Figure S6 : ^{31}P NMR spectrum of the ionic liquid phase (Cyphos IL 101) after regeneration and neutralisation.