Supplementary Information:

Selected bond lengths and angles:

Table S1. Metal coordination spheres.

	A		B	
	Fe1	**Fe2**	**Co1**	**Co2**
M-N7/1(tpt)	2.203(3)	2.199(3)	2.153(3)	2.156(3)
M-N2/8(tpt)	2.211(3)	2.225(3)	2.173(3)	2.191(3)
M-N3/9(tpt)	2.213(3)	2.217(3)	2.177(3)	2.189(3)
M-N41/43(NCS)	2.118(3)	2.091(3)	2.090(3)	2.069(3)
M-N42/44(NCS)	2.105(3)	2.095(3)	2.090(3)	2.055(3)
M-O50/60(BzOH)	2.116(2)	2.212(2)	2.105(3)	2.193(3)
N7/1-M-N2/8(tpt)	89.25(9)	90.82(9)	89.94(11)	90.84(12)
N7/1-M-N3/9(tpt)	94.74(10)	96.43(10)	94.81(11)	96.23(11)
N2/8-M-N3/9(tpt)	175.87(10)	170.32(9)	175.23(12)	171.65(12)

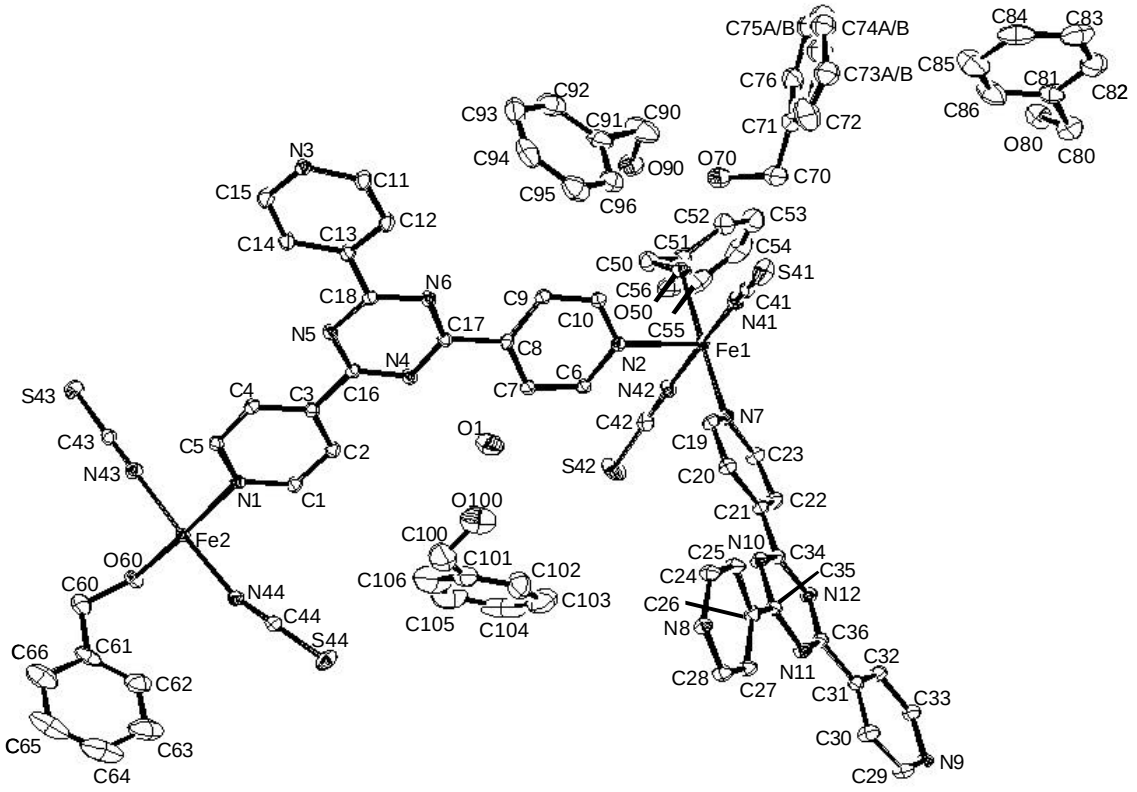
Refinement Details:

All ordered non-hydrogen atoms were modelled anisotropically. The aromatic C64 and C65 atoms of the BzOH molecule coordinated to Co2 in **B** gave large thermal ellipses when modelled as single anisotropic atoms and were each split into two isotropic sites with equal temperature factors. The occupations of the A and B components refined to 52.0(16) and 48.0(16)% respectively. The hydrogens attached to the coordinated oxygen atoms of the BzOH molecules were located from the difference map and restrained to ideal bond lengths. For both **A** and **B** the C73, C74 and C75 atoms of one of the un bound BzOH molecules could not be modelled anisotropically and were each split into two isotropic sites, with the A and B components refining to respective occupancy ratios of 50.6(6):49.4(6) for **A** and 53.2(7):46.8(7) for **B**. The hydrogens of the water molecule in both structures required bond length and/or angle restraints for stable refinement.

ORTEP Diagrams:

ORTEP diagrams of the asymmetric units for the single crystal X-ray structures **A** and **B** are given below. The diagrams have been created using the program ORTEP-3 for Windows version 1.075 (L. J. Farrugia, *J. Appl. Cryst*., 1997, **30**, 565). Hydrogen atoms have been removed from all diagrams for clarity. Ellipsoids are shown at 30% probability.

- $Fe(tpt)(NCS)_2(BzOH)\cdot 2(BzOH)\cdot \frac{1}{2}(H_2O)$ (**A**) at 150 K:



- $Co(tpt)(NCS)_2(BzOH)\cdot 2(BzOH)\cdot \frac{1}{2}(H_2O)$ (**B**) at 150 K: