

Table 1: Images taken using a digital camera to show the wear scars on the PEEK plates after 1MC wear simulation. Due to the difficulty in photographing the scratches on the plates, the wear scar has been marked in blue to highlight the scratches. The photographs are representative of the plates tested.












		Temperature of test	
		Rig temperature	Elevated temperature
Protein concentration (%)	0		
	2		
	5		
	25		
	90		

Table 2: Images of the scratches on the PEEK plates taken using a light microscope (Nikon SMZ800 stereomicroscope) at either 10X or 63X after 1MC wear simulation. The plates have been lit with an external light source to highlight changes in surface topography, scratches on the surface are visible as lighter regions. No protein deposition/precipitation or polymer transfer was visible on the surface of these plates. The scale bar represents 1mm.

		Temperature of test			
		Rig temperature		Elevated temperature	
		10X	63X	10X	63X
Protein concentration (%)	0				
	2				
	5				
	25				
	90				

Table 3: Images taken using a digital camera to showing cobalt chrome plates. When water or low concentrations of protein were used in the lubricant, polymer transfer was visible on the plates. In high protein concentration lubricant (90%), at room temperature, there was a deposit thought to be protein inside the wear area; at elevated temperature, there was evidence of protein precipitation on the plate outside of the wear scar.

0% Elevated temperature	
90% Rig temperature	
90% Elevated temperature	