

## SOURCES OF METALS

NB Exact metal composition may vary

### DENTAL

<b>Amalgams</b> Zinc is also present but is not tested in MELISA	<b>Crowns non noble Stainless steel, nickel/chromium or cobalt/chromium</b>	<b>Crowns noble</b> Precise alloys used vary between dental laboratories
Silver	Chromium	Gold
Tin	Molybdenum	Platinum
Copper	Manganese	Silver
Inorganic mercury	Cobalt	Palladium
Nickel	Nickel	Indium
		Ruthenium
		Iridium
		Gallium
<b>Cobalt-Chromium implants</b>	<b>Titanium Implant (dental)</b>	<b>Maryland bridge</b>
Cobalt	Titanium dioxide	Cobalt
Chromium	Titanium sulphate	Chromium
Molybdenum	Aluminium	Molybdenum
Tungsten	Vanadium	Nickel
Manganese	Nickel	Tungsten
<b>Root fillings</b>	<b>Braces/Retainers</b>	
Bismuth	Chromium	
Tantalum	Manganese	
Cadmium – older restorations	Molybdenum	
Formaldehyde – older restorations	Nickel	

## ORTHOPAEDIC AND CV

Titanium Implant (spinal)	Surgical steel/ stainless steel	Cobalt Chrome TKR /THR
Titanium dioxide	Chromium	Cobalt
Titanium sulphate	Molybdenum	Chromium
Aluminium	Manganese	Manganese
Vanadium	Nickel	Tungsten
Nickel	Tungsten	Nickel
Tantalum and Niobium may be present		

Pacemakers	Pacemaker Wires	Stents
Platinum	Cobalt	<u>Request stent alloys</u>
Iridium	Chromium	
Titanium dioxide	Molybdenum	
Titanium sulphate	Nickel	
	Manganese	

## ENVIRONMENTAL AND MEDICATION

Lead - from water pipes	Palladium - motorways	Methyl mercury – fish
Cadmium - from polluted areas	Inorganic mercury - crematorium	Aluminium - vaccines adverse effect
Gluten – if digestive issues present	Titanium dioxide – coating on vitamins and medication	Thimerosal – some vaccines and flu vaccine