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Title: The effect of divalent metal chelators and cadmium on serum phosphotriesterase, lactonase and arylesterase activities of paraoxonase 1

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Highlights

- Summarized storage conditions of blood to determine paraoxonase 1 activities.
- Confirmation the association of paraoxonase 1 with HDL in blood.
- Cadmium inhibits all activities of paraoxonase1 in blood.
- D-penicillamine decreases paraoxonase 1 activities stronger than EDTA.

Paraoxonase 1 (PON1) is calcium depend enzyme involved in many functions in human body. PON1 is synthesized in the liver and secreted to the bloodstream where bounds high-density lipoproteins (HDL). Association of PON1 with HDL increases the enzyme stability and biological activities. PON1 have three different activities: phosphotriesterase, lactonase and arylesterase. Until now there is now commercial available kits to determine these three PON1

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