

# Sodium nitroprusside

**Sodium nitroprusside**, systematically called "sodium pentacyanonitrosyl ferrite",  $\text{Na}_2[\text{Fe}(\text{CN})_5\text{NO}]$  is a complex compound used in laboratory diagnostics and treatment of arterial hypertension. In the solid state, it is most often available as a dihydrate, when it is in the form of dark red crystals. Reactions with sodium nitroprusside are used, for example, to detect urinary ketone bodies, sulfhydryl groups (e.g., cysteine), and others.

Intravenously administered nitroprusside is a nitric oxide donor and therefore acts as a direct vasodilator. It is used to treat an otherwise unmanageable hypertensive crisis. As it is highly unstable, it is prepared before application as a solution protected from light. It is administered by an intravenous infusion for up to 72 hours, continuous monitoring of blood pressure is required.

The name "nitroprusside" is derived from the English trivial name hydrocyanic acid (HCN), "prussic acid". Hydrocyanic acid was first produced by Scheel in 1782 by heating Berlin Blue. Berlin Blue is a mixture of complex compounds in which ferric hexacyanoferrate,  $\text{Fe}^{\text{III}}[\text{Fe}^{\text{II}}(\text{CN})_6]$  predominates and was discovered in 1704 by Dieselbach in Berlin (ie in the capital of Prussia).



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## Sources

### Used literature

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### References