

Hemosiderin

Hemosiderin or haemosiderin is an iron-storage complex. It is only found within cells (as opposed to circulating in blood) and appears to be a complex of ferritin, denatured ferritin and other material. The iron within deposits of hemosiderin is very poorly available to supply iron when needed. Hemosiderin can be identified histologically with "Perls' Prussian-blue" stain. In normal animals, hemosiderin deposits are small and commonly inapparent without special stains. Excessive accumulation of hemosiderin is usually detected within cells of the mononuclear phagocyte system (MPS) or occasionally within epithelial cells of liver and kidney.

Blood goes through sequential stages of degradation from [oxyhemoglobin](#) to [deoxyhemoglobin](#), [methemoglobin](#), and then [hemosiderin](#).

MRI

Hemosiderin exhibits a stronger [T2](#) shortening effect than [deoxyhemoglobin](#). The extent of the 'blooming artifact' may therefore reflect a composition of different iron forms

Diseases

Several disease processes result in deposition of larger amounts of hemosiderin in tissues; although these deposits often cause no symptoms, they can lead to organ damage

Hemosiderin is most commonly found in macrophages and is especially abundant in situations following hemorrhage, suggesting that its formation may be related to phagocytosis of red blood cells and hemoglobin. Hemosiderin can accumulate in different organs in various diseases.

Iron is required by many of the chemical reactions (i.e. oxidation-reduction reactions) in the body but is toxic when not properly contained. Thus, many methods of iron storage have developed.

see [Hemosiderin rim](#)

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