

Is iron separation acceptable for natural mineral waters used to treat rheumatic conditions? The opinion of the National Academy of Medicine

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Iron is an unstable mineral element which is spontaneously deposited in pipes and machines leading to favour the biofilms and their microbial colonisation. This natural phenomenon increases by air contact and time (hours) making iron separation from mineral waters a relevant issue for the managers of thermal care facilities. Such a separation is authorized by the french and european regulations when « it does not alter the constituents which support their properties ».

The National Academy of Medicine, according to its legal role, was asked if the iron separation from natural mineral waters used to treat rheumatic conditions could be acceptable.

Data from international scientific litterature make clear that iron could play a relevant role in the therapeutic effect of treatments delivered for conditions in which mineral water is directly applied on damaged tissues such as diseases affecting the skin, the respiratory, digestive and gynaecological tracts.

The analysis of trials (titles, key-words, composition of the waters, discussion of the role of minerals) assessing spa therapy in the treatment of the main rheumatic conditions (osteo-arthritis, back pain, fibromyalgia) do not support the idea that iron could be a relevant determinant of the therapeutic effect for such ailments.

Moreover, in many facilities, water is pumped and stored during the night to be delivered in the following hours as rheumatic treatment is highly water demanding. And it was demonstrated that after several hours iron had spontaneously precipitated.

Considering these different facts based on the current science data, the opinion of the Academy was that iron could not be considered a significant constituent of the therapeutic effect for rheumatology making iron separation acceptable for the mineral waters used for external treatments of rheumatic conditions. Such an opinion could be modified in the future according to novel scientific data.