INVESTIGATION OF SULFUR IN BLOOD: A NECESSITY FOR THE BRAZILIAN POPULATION

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The S in the body participates in the repair and construction of tissues and cells, in the formation of several vitamins and proteins and also helps to combat the microbes and parasites. The amount of S required per day is unknown to the general population, but the recommended value, from United States Department of Agriculture (Nutrient Database Laboratory), ranges from a minimum of 100 mg to a maximum of 850 mg. Also for Brazilian population the intake of S is not well established but, the interest in its evaluation becomes relevant due to the use of the elemental-S as a fertilizer in soils as well as the use of sulfate salts as a growth-promoting feed additives for farm animals (chickens, turkeys and pigs) highly consumed by the Brazilian population. Another aspect to be considered is the intake of some grains rich in S (mainly rice and beans) and dry fruit (that contain sulfur dioxide for keeping the color and protecting the flavor from oxidation) which is also present in Brazilian diet.

In this study the NAA technique was applied to determine S in whole blood from Brazilian habitants for the proposition of an indicative interval. The measures were performed considering lifestyle factors (non-smokers, non-drinkers and no history of toxicological exposure). The influence of age was also investigated considering several ranges (18-29, 30-40, 41-50, >50 years) as well as their geographic localization.

The results show significant differences when a comparison is performed in function of gender and geographic localization. These results emphasize the need to check the S levels in Brazilian diet and they can also be useful in other research areas such as health and nutrition.