

# Review of: "Effect of Yogurt on Fluoride Induced Toxicity in Rabbits"

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**Potential competing interests:** No potential competing interests to declare.

Research is very important and interesting, but it needs to be described very precisely. Below I present my suggestions for the authors of the manuscript:

- **Abstract** – It should be concise and clear. The scope is usually limited, so it is important that it conveys the most important information and generates further interest in the work. The introduction to the summary should briefly describe what work is and why it is important. A sentence or short paragraph should express the main objectives or research questions that the author is trying to solve in the work. Then add brief information about the research methodology used in the work. In scientific papers or research papers, it is worth specifying which specific methods and tools were used. Present key work results (without mysterious test codes). You can point out specific numbers, dates, or discoveries that are important and interesting. Finally, present a summary of the main conclusions or results of the work. Here the author should emphasize why his work is important and what is important.
- **Keywords** – Make sure the keywords are consistent with the content of the article and reflect its main themes well.
- **Introduction** – I don't see a strong connection between yogurt and iodine metabolism. Please refine the introduction by introducing the involvement of iodine and its derivatives in laboratory metabolism, especially the microflora used in yogurt or its chemical composition. Pay attention to the definition of yogurt according to CODEX STANDARD FOR FERMENTED MILKS (see: [https://www.fao.org/input/download/standards/400/CXS\\_243e.pdf](https://www.fao.org/input/download/standards/400/CXS_243e.pdf)), as well as probiotics according to <https://doi.org/10.1038/nrgastro.2014.66>.
- **Objectives** – Please specify this point so that it is strongly consistent with the title. For example: "The aim of this study was to investigate the influence of yogurt on relieving fluoride-induced renal toxicity in rabbits."
- **Experimental animals and adaptation** – Please describe laboratory animals in more detail. What age were they, body mass, health status, etc. What environmental conditions were they stored in? What was the daily life cycle like, daily activity, etc.?
- **Experimental design** – Please provide detailed information about the feed (composition, portion size, etc.), feeding, yogurt used (microbiological composition, basic chemical composition, technological additives used), fluoride salt used (and preparation for administration to animals).
- **Assessment of renal function** – Please provide detailed information about the biosystem of the BTS-350 kit. Add information about the number of repeats of analyzes.
- **Statistical analysis** – Please provide specific details about this analysis. What analysis techniques did you use? Which p-value was accepted?

- **Figures** – Please provide information about the symbols of the samples and the number of replicates of the analyses.
- **Results and Discussions** – Please discuss the importance of fluoride salt for its metabolism.
- **Creatinine** – You have no evidence that the observed results were determined by yogurt bacteria. You simply stated that adding yogurt to the rabbit's diet had an impact. What is known about the yogurt used? What is the content of protein, fat, carbohydrates and dry matter? What acidity did yogurt have? Did it have any further technical additions? Which microflora was used? Only on the basis of such precise information can you make some hypotheses that the yogurt component determines the serum creatinine concentration.
- **Uric acid** – Note the same as above. You simply stated that adding yogurt to the rabbit's diet had an impact. You have no evidence that the observed results were determined by yogurt bacteria. Present the possible mechanism of influence of yogurt ingredients on the observed metabolic changes. Could the frequency of feeding food and yogurt have an influence on the observed effects?
- **Blood urea nitrogen (BUN)** – Note the same as above. You simply stated that adding yogurt to the rabbit's diet had an impact. You have no evidence that the observed results were determined by yogurt bacteria. BUN concentration is often used in medical diagnostics to assess kidney function. However, it should always be interpreted in the context of other clinical studies and information to understand exactly what may affect its values. A high BUN concentration may indicate kidney problems, but this is not clear as many other factors can influence the value. It must be discussed very precisely but carefully. I believe you should describe that the main factor affecting BUN concentration is kidney function. The body's level of hydration has an influence on BUN concentration. Dehydration, when the body has a limited amount of fluid, can cause urea levels in the blood to rise, especially if the diet is high in protein. High protein consumption can increase BUN concentrations. The protein consumed is the main source of nitrogen, which is converted into urea in the body. In addition, as the animal ages, there may be a natural increase in BUN concentration due to changes in kidney function. Have you investigated this connection?
- **Serum sodium** – Note the same as above. You simply stated that adding yogurt to the rabbit's diet had an impact. You have no evidence that the observed results were determined by yogurt bacteria. Serum sodium is regulated by many factors and is subject to changes based on various medical conditions, fluid intake, and dietary sodium levels. What was the sodium content in the diet of individual groups of rabbits? What was the sodium content in the yogurt used? Consuming a large amount of sodium in the diet can lead to an increase in sodium levels in the blood. However, this is not the only factor that affects the concentration of sodium in the blood. Dehydration can lead to an increase in sodium concentration, while excess fluid can lead to a decrease in sodium concentration. Have you investigated this connection?
- **Serum potassium** – Note the same as above. You simply stated that adding yogurt to the rabbit's diet had an impact. You have no evidence that the observed results were determined by yogurt bacteria. The food consumed affects the potassium level in the blood. A diet rich in potassium can increase concentration, while a lack of potassium in the diet can lead to a decrease in potassium levels. What was the potassium content in the diet of individual groups of rabbits? What was the potassium content in the yogurt used? Have you investigated this connection? In addition, you probably know that potassium levels in the body can be related to sodium levels, as both electrolytes play an important role in maintaining the body's electrolyte balance. Dehydration can affect the concentration of electrolytes, including sodium

and potassium. In clinical practice, sodium and potassium levels are often analyzed together, and the potassium to sodium ratio (K/Na ratio) can be used to assess the body's electrolyte balance. Changes in sodium and potassium levels can affect the functioning of the body, especially the nervous system and heart, which is why monitoring their levels is important in the diagnosis and treatment of many disease conditions. Why haven't you examined the K/Na ratio? Discuss why the results obtained are important in the context of the problem under study. Indicate what impact these results might have on the field of study or clinical practice.

- Serum chloride – Note the same as above. You simply stated that adding yogurt to the rabbit's diet had an impact. You have no evidence that the observed results were determined by yogurt bacteria. The concentration of chloride, like other electrolytes such as sodium and potassium, is strictly regulated as part of homeostasis. The kidneys play a key role in maintaining electrolyte balance and controlling the excretion or retention of chloride depending on the body's needs. The food consumed affects the chloride levels in the body. What was the chloride content in the diet of individual groups of rabbits? What was the chloride content in the yogurt used? The body's level of hydration also affects chloride levels. Present the possible mechanism of influence of yogurt ingredients on the observed metabolic changes. Could the frequency of feeding food and yogurt have an influence on the observed effects?
- Conclusions – In my opinion, more detailed conclusions are required. Discuss why the results obtained are important in the context of the problem under study. Indicate what impact these results might have on the field of study or clinical practice. Mention possible limitations of your study, such as: e.g., sample size, methodology, scope of the experiment, etc. It is important to be aware of limitations so that readers can get a complete picture of the credibility of the results. If possible, discuss the possible practical implications of your studies. Explain how your findings may impact clinical practice, health policy, or other areas. Share ideas for possible directions for further research that might arise from your test. Indicate which areas would be worth pursuing in the future.
- The whole manuscript – Please check the spelling of the Latin names of lactic acid bacteria. The text contains significant errors in these names. *Lactobacillus paracasei* are currently classified as *Lacticaseibacillus paracasei* (see: [lactobacillus.ualberta.ca](https://lactobacillus.ualberta.ca)), *S. salivarius*, *thermophilus* are currently classified as *S. thermophilus*, *Lactobacillus plantarum* are currently classified as *Lactiplantibacillus plantarum*, etc. The type of lactic acid bacteria is not an indication of their probiotic properties. Probiotics are specific LAB strains (see: <https://doi.org/10.1038/nrgastro.2014.66>). The first part of the bacteria name (i.e. the bacterial genus) is written in capital letters, the second part of the bacteria name (i.e. the name of the bacterial species) is written in lower case letters.