Re: Analysis of Fecal DNA Methylation to Detect Gastrointestinal Neoplasia

I have concerns that an article recently published in the Journal (1) needs some correction by its authors. On page 1246, line 14, in the right-hand column, the authors described the use of a reagent containing “8.64 N sodium bisulfite.” I have been engaged in studies using bisulfite since my work 40 years ago revealed its ability to convert cytosine into uracil (2). I know that “8.64 N” is impossible because the saturation level of sodium bisulfite (NaHSO₃) in water is 5–6 M even at high temperatures. The authors’ use of the letter “N” for concentration instead of the correct letter “M” is inappropriate, too.

The bisulfite concentration in the DNA treatment is also problematic. The authors mixed one volume of the bisulfite solution with two volumes of the fecal sample. This would reduce the bisulfite concentration to one-third of the original. I am sure that the subsequent incubation would result in incomplete cytosine conversion, that is, false positives for methylation sites.

I would appreciate it if you could have the authors address these defective aspects of this seemingly important contribution.

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References

Notes
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