Transit-Pellets Radiopaque Markers – Why 22% Barium Sulphate (BaSO4)?

The composition of the Transit-Pellet markers has been selected to follow advice from international experts so that the markers reflect the transit of the solid and semisolid contents in the colon. Therefore, the proportion of the heavy barium sulphate was selected to be in the range 20-25% so that the specific gravity (SG) of the markers should be well below 2.0. Otherwise, the markers will not yield the actual colonic transit time. If the other standard component silicone or a similar is used in the manufacture process and the proportion of barium is increased to up to around 40% the SG of the particles will be in the range 2.4 – 2.5! This is far above what is recommended by international experts (see articles by pioneers in the field, e.g. by Dr Cummings, Gut 1976;17:210-18). The radiological visibility will of course increase when using so much barium in the markers but the results obtained will not correctly measure the transit of colonic contents, that have a SG in the range 1.2 – 1.7. The dominating food residue cellulose has about 1.5.