

府 食 第 7 1 4 号  
令和 4 年 12 月 23 日

厚生労働省医薬・生活衛生局  
食品基準審査課長 殿

内閣府食品安全委員会事務局  
評価第一課長

食品健康影響評価に係る補足資料の提出依頼について

令和 4 年 8 月 23 日付け厚生労働省発生食0823第 2 号をもって貴省から当委員会に意見を求められた亜硫酸ナトリウム、次亜硫酸ナトリウム、二酸化硫黄、ピロ亜硫酸カリウム及びピロ亜硫酸ナトリウムに係る食品健康影響評価について、令和 4 年 12 月 7 日開催の食品安全委員会添加物専門調査会（第 189 回会合）における審議の結果、別紙のとおり補足資料が必要となりましたので、令和 5 年 12 月末までに提出をお願いいたします。

なお、令和 5 年 12 月末までに補足資料を提出できないことが明らかとなった場合は、速やかに提出できない理由及び今後の対応方針について提出をお願いいたします。

(別紙)

亜硫酸ナトリウム、次亜硫酸ナトリウム、二酸化硫黄、ピロ亜硫酸カリウム及びピロ亜硫酸ナトリウムの食品健康影響評価に必要な補足資料

	補足資料	要求の理由
1	<p>欧州食品安全機関（EFSA）が 2022 年 11 月 24 日に公表した科学的意見書 (<a href="https://www.efsa.europa.eu/en/efsajournal/pub/7594">https://www.efsa.europa.eu/en/efsajournal/pub/7594</a>) (以下「科学的意見書」という。)において引用されている次の資料を提出すること。</p> <p>科学的意見書の 4.5.2.1 ADME で引用されている、</p> <ul style="list-style-type: none"><li>• Gunnison AF, Bresnahan CA and Palmes ED, 1977. Comparative sulfite metabolism in the rat, rabbit, and rhesus monkey. <i>Toxicology and Applied Pharmacology</i>, 42, 99–109.</li><li>• Gibson CR, Gleason A and Messina E, 2021. Measurement of total liver blood flow in intact anesthetized rats using ultrasound imaging. <i>Pharmacology Research &amp; Perspectives</i>, 9, e00731.</li></ul> <p>科学的意見書の 4.5.2.4 Neurotoxicity で引用されている、</p> <p><u>Evoked Potentials</u></p> <ul style="list-style-type: none"><li>• Küçükatay V, Hacıoğlu G, Savcıoğlu F, Yargıçoğlu P and Açar A, 2006. Visual evoked potentials in normal and sulfite oxidase deficient rats exposed to ingested sulfite. <i>Neurotoxicology</i>, 27, 93–100.</li><li>• Derin N, Akpınar D, Yargıoğlu P, Açar A and Aslan M, 2009. Effect of alpha-lipoic acid on visual evoked potentials in rats exposed to sulfite. <i>Neurotoxicology and Teratology</i>, 31, 34–39.</li><li>• Kencebay C, Derin N, Özsoy O, Kipmen-Korgun D, Tanrıover G, Öztürk N, Basaranlar G, Yargıoğlu-Akkiraz P, Sozen B and Açar A, 2013. Merit of quinacrine in the decrease of ingested sulfite-induced toxic action in rat brain. <i>Food and Chemical Toxicology</i>, 52, 129–136.</li><li>• Özsoy O, Aras S, Özkan A, Parlak H, Aslan M, Yargıoğlu P and Açar A, 2016. The effect of ingested sulfite on visual evoked potentials, lipid peroxidation, and antioxidant status of brain in normal and sulfite oxidase-deficient aged rats. <i>Toxicology and Industrial Health</i>, 32, 1197–1207.</li></ul> <p><u>Learning/Memory</u></p> <ul style="list-style-type: none"><li>• Küçükatay V, Savcıoğlu F, Hacıoğlu G, Yargıçoğlu P and Açar A, 2005. Effect of sulfite on cognitive function in normal and sulfite</li></ul>	<p>亜硫酸塩等の評価に必要であるため。</p>

<p>oxidase deficient rats. <i>Neurotoxicology and Teratology</i>, 27, 47–54.</p> <ul style="list-style-type: none"> <li>• Noorafshan A, Asadi-Golshan R, Karbalay-Doust S, Abdollahifar MA and Rashidiani-Rashidabadi A, 2013. Curcumin, the main part of turmeric, prevents learning and memory changes induced by sodium metabisulfite, a preservative agent, in rats. <i>Experimental Neurobiology</i>, 22, 23–30.</li> <li>• Ozsoy O, Aras S, Ozkan A, Parlak H, Gemici B, Uysal N, Aslan M, Yargicoglu P and Agar A, 2017. The effect of ingested sulfite on active avoidance in normal and sulfite oxidase-deficient aged rats. <i>Toxicology Mechanisms and Methods</i>, 27, 81–87.</li> </ul> <p><u>Cellular/ molecular changes</u></p> <ul style="list-style-type: none"> <li>• Karimfar MH, Noorafshan A, Rashidiani-Rashidabadi A, Poostpasand A, Asadi-Golshan R, Abdollahifar MA and Karbalay-Doust S, 2014. Curcumin prevents the structural changes induced in the rats’ deep cerebellar nuclei by sodium metabisulfite, a preservative agent. <i>Asian Pacific Journal of Tropical Medicine</i>, 7, S301–S305.</li> <li>• Noorafshan A, Asadi-Golshan R, Abdollahifar MA and Karbalay-Doust S, 2015. Protective role of curcumin against sulfite-induced structural changes in rats’ medial prefrontal cortex. <i>Nutritional Neuroscience</i>, 18, 248–255.</li> <li>• Kocamaz E, Adiguzel E, Buket ER, Gundogdu G and Küçükataş V, 2012. Sulfite leads to neuron loss in the hippocampus of both normal and SOX-deficient rats. <i>Neurochemistry International</i>, 61, 341–346.</li> <li>• Öztürk OH, Küçükataş V, Yönden Z, Ağar A, Bağcı H and Delibas, N, 2006. Expressions of N-methyl-D-aspartate receptors NR2A and NR2B subunit proteins in normal and sulfite-oxidase deficient rat’s hippocampus: effect of exogenous sulfite ingestion. <i>Archives of Toxicology</i>, 80, 671–679.</li> <li>• Derin N, Yargıçođlu P, Aslan M, Elmas O, Agar A and Aicigüzel Y, 2006. The effect of sulfite and chronic restraint stress on brain lipid peroxidation and anti-oxidant enzyme activities. <i>Toxicology and Industrial Health</i>, 22, 233–240.</li> <li>• Küçükataş V, Bor-Kucukatay M, Atsak P and Ağar A, 2007. Effect of ingested sulfite on hippocampus antioxidant enzyme activities in sulfite oxidase competent and deficient rats. <i>International Journal of Neuroscience</i>, 117, 971–983.</li> </ul> <p>科学的意見書の 4.5.2.6 Hypersensitivity and intolerance で引用されている、</p>	
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	<ul style="list-style-type: none"> <li>• Fine JM, Gordon T and Sheppard D, 1987. The roles of pH and ionic species in sulfur dioxide- and sulfite- induced bronchoconstriction. <i>The American Review of Respiratory Disease</i>, 136, 1122–1126.</li> <li>• Andersson E, Knutsson A, Hagberg S, Nilsson T, Karlsson B, Alfredsson L and Torén K, 2006. Incidence of asthma among workers exposed to sulphur dioxide and other irritant gases. <i>The European Respiratory Journal</i>, 27, 720–725.</li> <li>• Wüthrich B, 2018. Allergic and intolerance reactions to wine. <i>Allergologie Select</i>, 2, 80–88.</li> <li>• Nadel JA, Salem H, Tamplin B and Tokiwa Y, 1965. Mechanism of bronchoconstriction: during inhalation of sulfur dioxide; reflex involving vagus nerves. <i>Archives of Environmental Health: An International Journal</i>, 10, 175–178.</li> <li>• Van Schoor J, Joos GF and Pauwels RA, 2000. Indirect bronchial hyperresponsiveness in asthma: mechanisms, pharmacology and implications for clinical research. <i>European Respiratory Journal</i>, 16, 514–533.</li> <li>• Skypala IJ, Williams M, Reeves L, Meyer R and Venter C, 2015. Sensitivity to food additives, vaso-active amines and salicylates: a review of the evidence. <i>Clinical and Translational Allergy</i>, 5, 1–11.</li> </ul>	
2	上記 1 に関連する資料や考察があれば、併せて提供すること。	同上