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[\[PDF \(1141K\)\]](#) [\[References\]](#)**Features and sources of organic components in surface sediments of Lake Nishi-inbanuma in Chiba Prefecture, Japan**[Genki I. MATSUMOTO](#)<sup>1)</sup>, [Yuki AKUTSU](#)<sup>2)</sup> and [Nobuki TAKAMATSU](#)<sup>2)</sup>

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**Abstract**

Lake Nishi-Inbanuma (area 680 ha, average depth 1.8 m) in northwest Chiba Prefecture, Japan, is known as a typical eutrophic lake. We studied organic components in the surface sediments (0-5 cm) of the lake to elucidate their features and sources. The lake's high total organic carbon (TOC) contents (3.41-7.18 % with an average of 5.54%) revealed it as a typical eutrophic lake. Normal-alkanes maximizing at n-C<sub>29</sub> with a predominance of odd-carbon numbers were detected, together with squalane and UCMH (unresolved complex mixture of hydrocarbons). Stenols and stanols (C<sub>27</sub>-C<sub>29</sub>) in the lake sediments originated from plankton and vascular plant debris. Stanols are probably derived from diatoms and dinoflagellates as well as to the influence of a selective degradation and reduction of stenols in the sediments. The contribution of autochthonous organic matter (47.1-72.2 % with an average of 62.8 %) was greater than that of allochthonous organic matter. The latter is mainly supplied from the Shinkawa and Kashimagawa Rivers along with the influence of petroleum products.

**Key Words:** [eutrophic lake](#), [Lake Nishi-inbanuma](#), [organic constituents](#), [surface sediment](#)[\[PDF \(1141K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)

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