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# 动物牙釉质氧同位素分析：一种季节性研究的新方法

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摘要：骨骼中的氧稳定同位素能反映动物的出生季节和生境改变。通过在牙釉质上进行系列采样，氧同位素的变化能还原动物一生的生活环境和饮食状况变化，为研究动物的季节特性提供了准确的手段和详细的信息。本文通过介绍国外研究实例，再结合笔者对英国丹伯里山堡遗址的研究，详细评述了氧同位素方法在动物季节性，尤其是家畜分娩季节研究上的应用，借此探讨人类如何积极顺应并主动协调动物资源的季节性波动。

关键词：氧稳定同位素分析；牙釉质序列采样；季节性；动物考古

Intra-tooth Oxygen Isotopic Analysis: a New Method to Approach Animal Seasonality

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Abstract: The oxygen isotope composition of animal bones is determined by the season of birth and habitat of animal individuals. Sequential sampling of tooth enamel can provide chronological order of  $^{18}\text{O}$  change in animals' body tissues and thus cast light upon animals' seasonality, including seasonal birth, short-term mobility, foddering strategy and so forth. This paper introduces the methodology of oxygen isotope analysis by presenting examples from both western academic frontier and the author's study on Danebury Hillfort in south England. The application of oxygen isotope analysis is further evaluated in the context of Chinese archaeology.

Keywords: Oxygen stable isotope, seasonality, intra-tooth sequential sampling, zooarchaeology