

2025(令和7)年度  
大学院入学試験 修士課程Ⅱ期  
人間生活学研究科 食物栄養学専攻

英語試験問題  
(食科学分野)

(注意事項)

1. 筆記用具は、鉛筆、またはシャープペンシルを使用してください。
2. 解答は、解答用紙に記述してください。
3. 解答用紙は、2枚配付します。足りなくなった場合は挙手してください。
4. 受験番号・氏名は、すべての解答用紙に記入してください。
5. 試験時間は60分です。

## 【英語科目】

問題１．次の英文は緑茶とほうじ茶が人間の反応に与える影響についての論文の要旨である。この要旨を読んで、以下の問いに答えよ。

### Effects of green tea and roasted green tea on human responses

Our objective was to elucidate the effects of tea consumption on refreshment and stress reduction/recovery through examining the multiple associations among factors such as various physiological responses and task performance. Participants included 20 healthy young men who performed a mental arithmetic task while 11 physiological responses were measured. The experiments were conducted twice under different beverage consumption conditions on separate days. The mental arithmetic task was executed six times in 1 day; participants ingested hot water, green tea, or roasted green tea (hojicha) before each task. Several subjective assessments: subjective fatigue, stress, mental workload, and flow were evaluated after each task. The R–R intervals, heart rate variability spectral components, the Poincaré plot indices (SD1 and SD2) and plethysmogram amplitude tended to decrease during task periods compared to resting periods. Tissue blood volume/flow (TBV, TBF) and near-infrared spectroscopy responses (NIRS) were lower in the tea condition than in the hot water condition. By scrutinizing various indicators, we found that aromatic stimulation of Japanese tea beverages has the potential to induce positive effects, enhance mental task performance, promote refreshment, and alleviate feelings of fatigue. These positive effects were observed even in small quantities and within a short duration, mirroring responses observed in daily consumption.

(Kurosaka C. *et al.*, Effects of green tea and roasted green tea on human responses. Scientific Reports, 13 April 2024より)

【注】 Plethysmogram：脳派、The mental arithmetic：暗算，Scrutinizing: 精査

(1) 下線部を和訳せよ。

(2) 著者らは、緑茶と紅茶にどのような効果を見つけたか答えよ。

問題２．次の文は本学の建学の精神である。英訳しなさい。

「身をきたへ 心きたへて 世の中に 立ちてかひある 人と生きなむ」

解答

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私たちの目的は、さまざまな生理学的反応や作業パフォーマンスなどの要因間の複数の関連性を調べることで、お茶の摂取がリフレッシュやストレス軽減/回復に及ぼす影響を明らかにすることであった。(30点)

(2) 著者らは、緑茶と紅茶にどのような効果を見つけたか答えよ。

日本茶飲料の芳香刺激は、ポジティブな効果を誘発し、精神的な作業パフォーマンスを高め、リフレッシュを促進し、疲労感を軽減する可能性があることが分かった。これらのポジティブな効果は、量かつ短期間の接種でも認められ、日常的な接種で観察される反応であることが分かった。(30点)

問題２．次の文は本学の建学の精神である。英訳しなさい。

「身をきたへ 心きたへて 世の中に 立ちてかひある 人と生きなむ」

Live as a person with purpose of contributing to the society, training ourselves academically and physically. (20点)