**Umumta’lim maktabining 2024-2025-o‘quv yili kimyo fanini amaliy o‘zlashtirish darajasini aniqlash**

 **10-\_\_\_sinf o‘quvchisi \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**F.I.SH.**

 **O‘quvchi to‘plagan umumiy ball:\_\_\_\_\_ (maksimal ball: 20)**

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| Yog‘lardan sovun olish **BSB-7**  |

**Maqsad:** sovundan yog‘ kislotalarining ajralishi hamda ularga oid reaksiya tenglamalarini yozish ko‘nikmalarini rivojlantirish.

**Kerakli asbob va jihozlar:** o‘simlik yog‘i, etanol, NaOH (ishqor), to‘yingan NaCl tuzi eritmasi, pankreatin 4-5 tabletka, stakan (100/150 ml) termometr, issiq suv (370С)-50 ml, lakmus qog‘ozi (qizil karam ekstrakti), probirkalar, suv hammomi, gaz o‘tkazgichli nayli tiqin, spirt lampasi yoki quruq yoqilg‘i

**Xavfsizlik qoidalari:**

1. Amaliy mashg‘ulotni o‘qituvchi ko‘rsatganidеk bajaring, ko‘rsatmaga rioya qiling.

2. Ishqor va yondiruvchi jihozlardan foydalanayotganingizda ehtiyotkorlikni unutmang!

**Ishni bajarish uchun ko‘rsatma**

**1-tajriba**. **Yog‘larning sovunlanishi. [10 ball]**

1. Probirkaga 2–3 g o‘simlik yog‘i solinib, ustiga 6–8 ml ish­qorning spirtli eritmasi qo‘shiladi.
2. Aralashma bir tekis qaynashi uchun probirkaga chinni yoki boshqa sopol parchalari (g‘isht bo‘laklari) joylashtiriladi, gaz o‘tkazuvchi nayli tiqin bilan yopiladi.
3. Suv hammomida 12–15 daqiqa qaynatiladi.
4. Olingan suyuqlikka to‘yingan NaCl tuzi eritmasi qo‘shiladi.

**2-tajriba.** **Yog‘lar karbon kislotalar va glitseringa parchalanishi [10 ball]**

1. 3-4 ta pankreatin tabletkani maydalang. Maydalangan pankreatinga 50 ml iliq suv quying (taxminan 370C). Olingan eritmani cho‘kma yo‘qolgunga qadar yaxshilab aralashtiring.
2. Bir osh qoshiq o‘simlik yog‘ini o‘lchab, olingan eritmaga qo‘shing.
3. Eritmani aralashtirgich yoki qoshiq bilan bir daqiqa aralashtiring.
4. Eritmani biroz qoldiring, keyin esa eritmaga lakmus qog‘ozini botiring yoki bir tomchi qizil karam ekstraktini qo‘shing.

**Ishni bajarish tartibi:**

**1-tajriba.**

I. Birinchi tajribada qanday jarayon sodir bo‘lishini izohlang. [3 ball]

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 II. Ushbu tajribada qanday ataladi.[3 ball] **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 III. Reaksiya tenglamasini yozing. [4 ball]

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 **2-tajriba.**

I. Suv harorati 37oC o‘rniga 0oC bo‘lsa qanday o‘zgarishlar sodir bo‘ladi. Javobingizni tushuntiring. [4 ball]

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II. Sog‘lom odam pankreatinni yog‘larni parchalash (gidroliz qilish) uchun ishlatishi mumkinmi? Javobingizni tushuntiring. [3 ball] **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

III. Odam organizmida yog‘lar qanday tabiiy “erituvchilari” mavjud? Yog‘ parchalanganda nima hosil bo‘ladi? [3 ball]

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