**YOD OLISH UCHUN SIFAT REAKSIYALAR**

“HALOL VA HAROM ILMIDAN KEYINGI

ENG SHARAFLI ILM BU – TIB ILMIDIR !!!”

***IMOM SHOFE`IY***

|  |  |  |  |
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| **№** | **ION**  **(**MODDA**)** | **REAGENT**  **(**REAKSIYA SHAROITI**)** | **REAKSIYA BELGILARI VA TENGLAMALARI** |
| **NOORGANIKA** | | | |
| **1** |  | **LAKMUS**  (C9H10NO5) | QIZIL |
| **METIL ZARG`ALDOG`I**  (C14H14N3O3SNa) | PUSHTI |
| **2** |  | **; tO C**  ISHQORLAR BILAN QIZDIRISH | O`TKIR HIDLI GAZ(**NH3**) AJRALADI |
| **NESSLER REAKTIVI**  (K2[HgI4] + KOH) | QIZG`ISH-QO`NG`IR CHO`KMA |
| **3** |  |  | **!!! CHO`KMA EMAS !!!** |
|  | OQ-PAG`A(**AgCl**) CHO`KMA |
|  | OCH-SARIQ(**AgBr**) CHO`KMA |
|  | SARIQ(**AgI**) CHO`KMA |
|  | QO`NG`IR(**Ag2O**) CHO`KMA |
|  | YORQIN SARIQ(**Ag3PO4**) CHO`KMA |
|  | OQ (**Ag2CO3**) CHO`KMA |
| **4** |  | ALANGA | SARIQ |
| **5** |  | ALANGA | OCH-BINAFSHA |
| **6** |  | ALANGA | OCH-QIZIL |
| **7** |  |  | OQ(**CaCO3**) CHO`KMA |
| C2 | OQ(**CaC2O4**) CHO`KMA |
| ALANGA | G`ISHTSIMON QIZG`ISH |
| **8** |  |  | OQ(**BaSO4**) CHO`KMA |
|  | OQ(**BaCO3**) CHO`KMA |
|  | OQ(**Ba3(PO4**)2) CHO`KMA |
|  | SARIQ(**BaCrO4**) CHO`KMA |
| ALANGA | SARIQ-YASHIL |
| **9** | (havorang yoki yashil) |  | HAVORANG/KO`K(**Cu(OH)2**) CHO`KMA  (Qizdirilganda qora-CuO) |
| KI | OQ(**CuI2**) CHO`KMA |
| **10** | (och yashil) |  | OCH YASHIL(**Fe(OH)2**) CHO`KMA |
| Me2CO3 | OQ (**FeCO3**) CHO`KMA |
| K3[Fe(CN)6]  (qizil qon tuzi) | KO`K(**Fe3[Fe(CN)6]2**)CHO`KMA  (Trunbul ko`ki) |
| **11** | (sariq-jigarrang)  (zang rang) |  | QO`NG`IR(**Fe(OH)3**) CHO`KMA |
| NH4SCN | YORQIN QIZIL(**Fe(SCN)3**) ERITMA |
| Na3PO4 | OCH SARIQ(**FePO4**) CHO`KMA |
| K4[Fe(CN)6]  (qizil qon tuzi) | TO`Q KO`K(**Fe4[Fe(CN)6]3**)CHO`KMA  (Berlin lazuri yoki ko`ki) |
| **12** | (Och yashil) |  | YASHIL(**Ni(OH)2**) CHO`KMA |
| **13** | Pushti |  | PUSHTI(**Co(OH)2**) CHO`KMA |
| **14** |  |  | YOPISHQOQ OQ(**Al(OH)3**) CHO`KMA  (mol ishqorda eriydi) |
| ALIZARIN  (C12H6O2OH) | YORQIN QIZIL CHO`KMA  (aluminiy alizarinat) |
| Na2HPO4 | OQ(**AlPO4**) CHO`KMA |
| **15** | (Sariq-jigarrang) |  | BINAFSHA/YASHIL(**Cr(OH)3**)CHO`KMA  (mol ishqorda eriydi) |
| **16** | Och yashil |  | OQ(**Mn(OH)2**) CHO`KMA |
| **17** | Och yashil |  | OQ AMORF(**Mg(OH)2**) CHO`KMA |
|  | OQ AMORF(**MgCO3**) CHO`KMA |
| **18** |  |  | YOPISHQOQ OQ(**Zn(OH)2**) CHO`KMA  (mol ishqorda eriydi) |
|  | OQ(**ZnS**) CHO`KMA |
| **19** |  | **LAKMUS**  (C9H10NO5) | KO`K |
| **FENOLFTALEIN**  (C20H14NO4) | ⏺ **KUCHLI** ISHQORIY – MALINA/TO`Q QIZIL  ⏺ **O`RTA** KUCHLI – QIZIL  ⏺ **KUCHSIZ** ISHQORIY - PUSHTI |
| **METIL ZARG`ALDOG`I**  (C14H14N3O3SNa) | SARIQ |
| **20** |  |  | OQ-PAG`A(**AgCl**) CHO`KMA |
|  | OQ-KRISTALL(**PbCl2**) CHO`KMA |
| **21** |  |  | OCH-SARIQ(**AgBr**) CHO`KMA |
|  | OQ(**PbBr2**) CHO`KMA |
| **22** |  |  | SARIQ(**AgI**) CHO`KMA |
|  | SARIQ(**PbI2**) CHO`KMA |
|  | SARIG`ISH-OQ(**CuI**) CHO`KMA  ( 4 + 2 = 2CuI ↓ + I2) |
| **23** |  |  | OQ(**BaSO4**) CHO`KMA |
|  | OQ(**PbSO4**) CHO`KMA |
| **24** |  | Cu  (Kons eritmada) | QO`NG`IR (**NO2**) GAZ |
| **25** |  |  | OQ(**Ba3(PO4**)2 CHO`KMA |
|  | YORQIN SARIQ(**Ag3PO4**) CHO`KMA |
| **26** | sariq |  | SARIQ(**BaCrO4**) CHO`KMA |
| **27** | Cr2  To`q sariq/Qovoqrang | H2O2 | KO`K ERITMA |
| **28** | Pushti-siyohrang eritma | (Kislotali muhit) | ERITMA RANGSIZLANADI :  → |
| (Ishqoriy muhit) | YASHIL RANGLI ERITMA :  → |
| =  (Neytral muhit) | QORA CHO`KMA :  → MnO2 |
| **29** |  |  | QORA (**Ag2S**) CHO`KMA |
|  | QORA (**CuS**) CHO`KMA |
|  | PALAG`DA TUXUM HIDLI( **H2S**) GAZ |
| **30** |  |  | OHAKLI SUVLI LOYQALANTIRUVCHI (**CO2**) GAZ |
|  | OQ (**Ag2CO3**) CHO`KMA |
|  | OQ (**Ag2CO3**) CHO`KMA |
| **31** |  |  | QO`NG`IR (**NO2**) GAZ  2HNO2 = NO2 ↑+ NO + H2O |
| **32** |  |  | OQ YOPISHQOQ/GELSIMON(**H2SiO3**) CHO`MKA |
|  | SARIQ(**Ag2SiO3**) CHO`KMA |
| **33** | CH3CO | H2SO4 ; to | O`ZIGA HOS HID AJRALADI  (Uksus hidi keladi) |
| **ORGANIKA** | | | |
| **34** | ALKAN | ALANGA | KO`KISH ALANGA BERIB YONADI |
| **35** | SIKLOALKAN | Br2 | C3 – C4 halqalilar biriktiradi  C5 Cn halqalilar biriktirmaydi, almashinadi |
| **36** | ALKEN | Br2(AQ)  Qizg`ish-qo`ng`ir suvli eritma | RANGSIZLANTIRADI |
| ; kislotali  Pushti-siyohrang eritma | RANGSIZLANTIRADI |
| ; suvli  Pushti-siyohrang eritma | QORA-QO`NG`IR(**MnO2**) CHO`KMA |
| ALANGA | SARG`ISH ALANGA BERIB YONADI |
| **37** | ALKADIYEN | Br2(AQ)  Qizg`ish-qo`ng`ir suvli eritma | RANGSIZLANTIRADI |
| ; kislotali  Pushti-siyohrang eritma | RANGSIZLANTIRADI |
| ; suvli  Pushti-siyohrang eritma | QORA-QO`NG`IR(**MnO2**) CHO`KMA |
| **38** | TABIIY KAUCHUK  (Poliizopren) | OZON | LEVULIN ALDEGID HOSIL BO`LADI |
| **39** | QO`SH BOG` | OZON | TRIOZONID HOSIL BO`LADI |
| **40** | ALKIN  (Atsetilen) | ALANGA | TUTAB YONADI |
| **41** | AREN  (Benzol) | ALANGA | TUTAB YONADI |
| **43** | FENOL | FeCl3 | BINAFSHA RANGLI ERITMA |
| Br2(AQ)  Qizg`ish-qo`ng`ir suvli eritma | ⏺ RANGSIZLANTIRADI  ⏺ OQ (C6H2OHBr3) CHO`KMA  2,4,6 – tribromo fenol |
| Na2CO3 | RANGSIZ GAZ (**CO2**) AJRALADI |
| **44** | SPIRT  CnH2n+1OH | Na | **H2** AJRALADI |
| Cu ; toC | MEVA HIDLI BUG` (**CH3CHO**) |
| ALANGA | YORQIN-HAVORANG ALANGA BERIB YONADI |
| **45** | KO`P ATOMLI  SPIRT  ⏺ Etilen glikol  ⏺ glitserin | **FELING SUYUQLIGI**  Yangi tayyorlangan Cu(OH)2 | KO`K RANGLI ERITMA  ⏺ Mis glikolyat  ⏺ Misglitserat |
| **46** | GLITSERIN | KHSO4  Kaliy bisulfat | O`TKIR HIDLI(**CH2=CH-CHO**) AJRALADI  akrolein/propenal |
| **47** | ALDEGID  (R-CHO) | **FELING SUYUQLIGI**  Yangi tayyorlangan Cu(OH)2 | QIZIL(**Cu2O**) CHO`KMA  (mis ko`zgu yoki  !!! Svetafor(ko`k-sariq-qizil) reaksiya) |
| **TOLLENS REAKTIVI**  [Ag(NH3)2]OH  Kumush oksidining ammiakdagi eritmasi | KUMUSH KO`ZGU REAKSIYASI  Kumush idish devorlariga qoplanadi |
| NaHSO3  Natriy bisulfit | KRISTALL CHO`KMA |
| **48** | HCOOH  HCOOH | **LAKMUS**  (C9H10NO5) | QIZIL |
| ; kislotali  Pushti-siyohrang eritma | RANGSIZLANTIRADI |
| Na2CO3  eritma | RANGSIZ GAZ (**CO2**) AJRALADI |
| **TOLLENS REAKTIVI**  [Ag(NH3)2]OH  Kumush oksidining ammiakdagi eritmasi | KUMUSH KO`ZGU REAKSIYASI  Kumush idish devorlariga qoplanadi |
| H2SO4  ishtirokida qizdirish | RANGSIZ GAZ (**CO**) AJRALADI |
| **49** | TO`YINMAGAN KISLOTALAR  OLEIN  LINOL  LINOLEIN  PALMITOLEIN | ⏺ ; kislotali  Pushti-siyohrang eritma  Br2(AQ)  ⏺ Qizg`ish-qo`ng`ir suvli eritma | RANGSIZLANTIRADI |
| **50** | SOVUNLAR  C17H35COONa |  | OQ CHO`KMA  STEARIN KISLOTA QOTIB QOLADI |
| **51** | UGLEVODLAR  ⏺ Glukoza  ⏺ Maltoza  ⏺ Laktoza  ⏺ Sellibioza | **FELING SUYUQLIGI**  Yangi tayyorlangan Cu(OH)2 | ⏺ ODDIY SHAROITDA KO`K  ⏺ QIZDIRILGANDA QIZIL(**Cu2O**) CHO`KMA |
| **52** | GLUKOZA | **TOLLENS REAKTIVI**  [Ag(NH3)2]OH  Kumush oksidining ammiakdagi eritmasi | KUMUSH KO`ZGU REAKSIYASI  Kumush idish devorlariga qoplanadi |
| **53** | KRAXMAL  (C6H11O5)N | YOD ERITMASI | KO`K RANGGA BO`YALADI |
| **54** | AMINOBIRIKMALAR | **LAKMUS**  (C9H10NO5) | KO`K |
| **55** | BIRLAMCHI AMIN | HNO2 | RANGSIZ GAZ(**N2**) AJRALADI |
| **56** | ANILIN | Br2(AQ)  Qizg`ish-qo`ng`ir suvli eritma | ⏺ RANGSIZLANTIRADI  ⏺ OQ (C6H2NH2Br3) CHO`KMA  (2,4,6 – tribromo anilin) |
| **57** | OQSILLAR | **BIURET REAKSIYASI**  Cu(OH)2 ; ishqoriy muhit | Oqsil ishqoriy muhitda mis (II) sulfatning eritmasi bilan binafsha rangga bo`yaladi. Biuret reaksiyasi [—CO—NH—] bog`lar ya`ni, peptid bog`lar uchun xos reaksiyadir. Masalan, dipeptid — KO`K, tripeptid BINAFSHA, yuqori peptidlar esa QIZIL rang beradi. |
| **KSANTOPROTEIN REAKSIYASI** | Oqsil kons. HNO3 kislota ta`sirida sariq rangga bo`yaladi, kons. (25%) NH4OH ta`sirida esa sariq rang TO`Q SARIQ rangga o`tadi. |
| **MILON REAKSIYASI** | Oqsilni simob nitrat tuzining nitrat va nitrit kislotalardagi eritmasi bilan qizdirilganda oqsil QIZIL-QO`NG`IR cho`kma beradi, bu reaksiya tirozin va triptofanlar uchun xos. |
| **NINGIDRIN REAKSIYASI** | Oqsil ningidrin eritmasi bilan qo`shib qizdirilsa, KO`K bo`yalish beradi. |

**25-26-YANVAR** KUNI SERTIFIKAT IMTIXONIGA KIRUVCHI

BARCHA O`QUVCHILARMIZGA **OMAD TILAYMIZ** !!!

BARCHANGIZ +**A2** OLIB CHIQING 😊😊😊

BIZ USTOZLAR SIZLARGA ISHONAMIZ, ALBATTA, UDDALAYSIZLAR !!!

MILODIY

23.01.2025

PAYSHANBA