Identifying

The Mysterious

liquid

from Area

51

Snehan Gorain

Hardik Bandi

Abigail Boateng

Mathew Seftel

Performed on September 26th and 29th 2014

Due on Friday October 3rd

SNC1DP

Mr Enns

Mr Buffone

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Acid/base properties | | | | | | |
| **Liquid** | **10 dr. acid** | **5 dr. acid** | **No acid** | **10 dr. hydroxide** | **5 dr. hydroxide** | **No hydroxide** |
| **Water** | Cloudy w/ clear liquid on top. White in colour | Cloudy w/ clear liquid on top. White in colour | Cloudy w/ clear liquid on top. White in colour | Murky white and opaque | Murky white and opaque | Murky white and opaque |
| **Alcohol** | Milk mostly dissolved | Solid little bits of milk throughout | Milk dissolved. Murky | Opaque. Solid white colour | Opaque. Solid white colour | Opaque. Solid white colour |
| **L15** | Dark in colour. Clear liquid on top | Clear liquid on top | Bright in colour. Clear liquid on top | Dark in colour | Translucent | Opaque. White. Bright in colour |
| **Oil** | Milk mostly dissolved | Milk mostly dissolved | Milk mostly dissolved | Opaque. Solid white colour | Translucent. Dark more or less | Solid bits of milk throughout. |

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| Density | | | | |
| **Liquid** | **Mass of graduated cylinder (g)** | **Mass of liquid (g)** | **Volume of liquid (ml)** | **Density (g/ml)** |
| **Water** | 19.9 | 4.8 | 5 | 0.96 |
| **Oil** | 20.2 | 4.4 | 5 | 0.88 |
| **L15** | 20.6 | 4.5 | 5 | 0.9 |
| **Alcohol** | 26.7 | 3.8g | 5 | 0.76 |

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| --- | --- | --- | --- | --- |
| Capillary Action | | | | |
|  | Water | L15 | Alcohol | Oil |
| **Height of water in capillary tube (cm)** | 1.6 | 0.6 | 1.4 | 2.1 |

|  |  |  |  |
| --- | --- | --- | --- |
| Vaporization | | | |
|  | **Water** | **L15** | **Alcohol** |
| Starting temperature | 26 | 26 | 25 |
| Ending temperature (after mixing) | 24 | 20 | 19 |
| Change in temperature | -2 | -6 | -6 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| Water | Salt | Sugar | Baking soda |
| L15 |  |  |  |
| Alcohol |  |  |  |
|  |  |  |  |