**Activity 4. Analysis of the cosmetic cream**

Each group gets an ingredient description of one cream. For example, a daily cream “Intensive Care“ that promises to moisturise and provide nutrients to the skin.

Students have to classify the substances in the recipe according to their function:

- oils and fats;

- emulgators;

- waxes;

- humectants;

- preservatives;

- antioxidants;

- special agents (nutritive, exfoliative, bleaching, anti-inflammatory, anti-wrinkle etc.

ingredients);

- odours (essential oils).

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| [Prevera Bottle](http://www.daycream.net/prev) | ***Ingredients:*** *Aqua, paraffinum liquidum, PEG-6, sweet almond oil, cetyl alcohol, glycine, glycerine, citric acid, calcium chloride, vitamin A, vitamin E, linalool, propyl parabene*  *Cruelty free product.* |

Try to classify the substances in the recipe according to their function.

The use of each ingredient in the product should be explained: why is it added to the product, what kind of properties does it give to the product.

Regarding the other information on the label, see Appendix 2.

NB! The analysis does not have to be in a tabel format, but the following questions should be addressed.

NOTE! In a complex molecule there can be several different types of chemical bonds in one molecule. The best source to find the formula of a substance is Wikipedia. Information about the function of different ingredients can also be found at <http://www.makingcosmetics.com/>.

Table 2. Analysis of a product

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| Ingredient | Classification according to function (effect on skin or on the properties of the cream) | Structural formula  (if possible) | The type(s) of chemical bond(s) in the ingredients, in the case of possible hydrogen-bond please make a drawing picturing hydrogen bond between this substance and water  Is the substance hydrophobic/hydrophilic?  Indicate the hydrophobic/hydrophilic part of the molecule | Is the substance soluble in water or in oil/fat or in both? |
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Other remarks:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Based on the analysis, would you suggest this product to your friends? Why/why not?

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