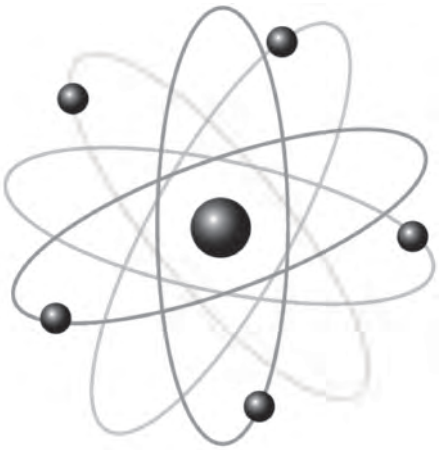
Test your knowledge in experimental sciences!



With the following questions you can test your knowledge of facts concerning experimental chemistry. What you have learned during the entire school year will help you. If you are able to answer them, you will get a certificate, the EDDL!

Anhand der folgenden Fragen kannst du am Ende des Schuljahres testen, ob du dir das Wichtigste aus der Experimentalwissenschaft Chemie gemerkt hast! Für alle beantworteten Fragen bekommst du ein Zertifikat, das EDDL!

EDDL:
Experimental Desk Driving Licence

Chapter 1: We are testing compounds

1) What is chemistry?
2) Name the three main forms of chemical substances.
3) How can material mixtures be separated into their original components?
4) Explain the process of distillation.

Chapter 2: Everything consists of smallest particles

1) Which particles do atoms consist of?
2) What do the chemical characteristics of atoms depend on?
3) In what way are the elements arranged in the periodic system of the elements?
4) How are non-metals joined together?

Chapter 3: Special elements

1) Does oxygen in air exist as a molecule or as an atom?
2) Into which form of energy is hydrogen converted in the gas cell?
3) In which two forms does carbon exist as an element?
4) Which special characteristics do noble gases have?

Chapter 4: Chemical reactions

1) What is activation energy?
2) When do you speak of synthesis in chemistry?
3) What happens when something burns?
4) When does iron rost?

Chapter 5: Acid or base

1) Name five common acids.
2) Explain the pH-value.
3) How do you mix sulphuric acid and water in the correct way?
4) In what products can you find ammonia?

Chapter 6: Water and air

1) What does water consist of?
2) Which substancs can be solved in water?
3) Name five substances that can be found in water.
4) Make a list of five air pollutants. Specify the components of air.

Chapter 7: Raw materials of the earth

1) Which metal is liquid? Is it the only one?
2) Why is aluminium used so often? What is aluminium used for?
3) Name the components of concrete.
4) List three elements that are needed for the production of glass.

Chapter 8: Black gold

1) Why is petroleum so important?
2) Which countries produce petroleum?
3) What is organic chemistry?
4) List five alkanes. Write down their chemical structure and the empirical formula.

Chapter 9: Naturally artificial

1) Wood mainly consists of … and … .
2) What is the empirical formula of cellulose?
3) Name two plants which are used for textile fibres.
4) What is a microfibre?

Chapter 10: All kinds of organics

1) Write down the chemical equation for alcoholic fermentation in formula and words.
2) Describe the easiest way to make vinegar.
3) List the raw ingredients needed to produce soap.
4) Name five ingredients used in washing powder nowadays.

Chapter 11: From healthy to poisonous

1) What are the three main nutrients our food is composed of?
2) Starch and cellulose have the same empirical formula. Explain the difference between these two.
3) What is Paracelsus' definition of toxicity?
4) Why do many pharmaceuticals have a poisonous effect (on humans)?

Vocabulary

air pollutants	*Luftschadstoffe*
alkanes	*Alkane*
ammonia	*Ammoniak*
carbon	*Kohlenstoff*
characteristics	*Eigenschaften*
chemical characteristics	*chemische Eigenschaften*
chemical structure	*Strukturformel*
common	*allgemein*
components	*Bestandteile*
concrete	*Beton*
distillation	*Destillation*
effect	*Wirkung*
empirical	*empirisch*
empirical formula	*Summenformel*
equation	*Gleichung*
fermentation	*Gärung*
fibres	*Fasern*
gas cell	*Brennstoffzelle*
hydrogen	*Wasserstoff*
liquid	*flüssig*
material mixtures	*Stoffgemische*
noble gases	*Edelgase*
nutriets	*Nährstoffe*
organic chemistry	*Organische Chemie*
oxygen	*Sauerstoff*
petroleum	*Erdöl*
pharmaceuticals	*Medikamente*
pH-value	*pH-Wert*
poisonous	*giftig*
to possess	*besitzen*
to provide	*versorgen*
raw materials	*Rohstoffe*
to rust	*rosten*
to seperate	*trennen*
to specify	*einzeln aufzählen*
starch	*Stärke*
sulphuric acid	*Schwefelsäure*
synthesis	*Synthese*
toxicity	*Giftigkeit*
vinegar	*Essig*

The student _____ has achieved the Certificate EDDL.
(name)

Date: _____ Teacher's signature: _____

Teacher's stamp