

## EIA / MEIA Worksheet

### 1 Vocabulary warm-up

1 microparticle	vázat se
2 coated	skleněná vlákna
3 capture molecule	zvýšit/snížit
4 surface area	promytí cely
5 reaction vessel	značený
6 matrix cell	rychlost
7 glass fibres	odstranit
8 binding	zadržet
9 cause	mikročástice
10 retain	povrch
11 labelled	reakční nádobka
12 bind	způsobit, zapříčinit
13 cell wash	navázání
14 remove	potažený
15 rate	matricová buňka
16 increase/decrease	záchyťová molekula

### 2 Microtitre plates

Read and fill the gaps with words made from the words in brackets.

A microtitre plate or microplate or microwell plate or multiwall, is a flat plate with multiple "wells" used as small test tubes. The microplate has become a standard tool in \_\_\_\_\_ (ANALYSIS) research and clinical \_\_\_\_\_ (DIAGNOSIS) testing laboratories. A very common usage is in the enzyme-linked immunosorbent assay ([ELISA](#)), the basis of most modern \_\_\_\_\_ (MEDICINE) diagnostic testing in humans and animals.

Each well of a microplate \_\_\_\_\_ (TYPICAL) contains between tens of nanolitres to several millilitres of liquid. They can also be used to store dry powder or as racks to support glass tube inserts. Wells can be \_\_\_\_\_ (CIRCLE) or square. Today, there are microplates for nearly every \_\_\_\_\_ (APPLY) in life science research which involves filtration, \_\_\_\_\_ (SEPARATE), optical detection, \_\_\_\_\_ (STORE), reaction mixing or cell culture.

### 3 Listening

A Listen and complete the gaps

- 1 the EIA can be done in a multi-well microtiter plate or any other solid adherent \_\_\_\_\_
- 2 the plate is prepared to perform a particular assay by \_\_\_\_\_ the wells with antibodies that bind to the antigen of interest
- 3 then the \_\_\_\_\_ are filled with the clinical sample which could be a sample of serum, respiratory secretions, cerebrospinal fluid, urine or some other body fluid
- 4 if the antigen is present in the sample, it will \_\_\_\_\_ to the fixed antibodies
- 5 the wells are then washed out to remove any of the unattached \_\_\_\_\_, leaving the antigen of interest stuck to the wells
- 6 the second \_\_\_\_\_, directed against another epitope on the target antigen is added
- 7 these antibodies are conjugated covalently to an \_\_\_\_\_
- 8 they bind to the antigen which is fixed in the well and this provides a second level of \_\_\_\_\_ for the assay
- 9 the wells are washed again to remove any \_\_\_\_\_ antibodies
- 10 a \_\_\_\_\_ of colorogenic enzyme substrate is added

B Find words for the following definitions:

- 1 not soft, hard
- 2 determination of the amount of a particular constituent of a mixture
- 3 take away
- 4 joined together
- 5 causing a substance to change colour

## 4 Describing the assay

A Put the pictures in the correct order and label them with the short texts.

An enzyme-labeled antibody specific to the antigen is added (conjugate)

Test specimen is added, which may or may not contain the antigen

Chromogenic substrate is added, which in the presence of the enzyme, changes color.

Antigen-specific antibody is attached to a solid-phase surface

B Describe the whole procedure using the key terms (purpose – equipment – steps – result and conclusion).

## 5 Grammar – Passive voice

**42.3** Put the verb into the correct form, present simple or past simple, active or passive.

- 1 It's a big factory. Five hundred people are employed (employ) there.
- 2 Did somebody clean (somebody / clean) this room yesterday?
- 3 Water covers (cover) most of the earth's surface.
- 4 How much of the earth's surface is covered (cover) by water?
- 5 The park gates lock (lock) at 6.30 p.m. every evening.
- 6 The letter was sent (send) a week ago and it (arrive) arrived yesterday.
- 7 The boat hit a rock and sank (sink) quickly. Fortunately everybody was rescued (rescue).

**42.4** Rewrite these sentences. Instead of using **somebody, they, people** etc., write a passive sentence.

- 1 Somebody cleans the room every day. The room is cleaned every day.
- 2 They cancelled all flights because of fog. All flights were cancelled because of fog.
- 3 People don't use this road much. This road is not used much.
- 4 Somebody accused me of stealing money. I was accused of stealing money.
- 5 How do people learn languages? How are languages learned?
- 6 People warned us not to go out alone. We were warned not to go out alone.

**43.3** Rewrite these sentences. Instead of using **somebody or they** etc., write a passive sentence.

- 1 Somebody has cleaned the room. The room has been cleaned.
- 2 Somebody is using the computer right now. The computer is being used right now.
- 3 I didn't realise that somebody was recording our conversation. I didn't realise that I was being recorded.
- 4 When we got to the stadium, we found that they had cancelled the game. When we got to the stadium, we found that the game had been cancelled.
- 5 They are building a new ring road round the city. A new ring road is being built round the city.
- 6 They have built a new hospital near the airport. A new hospital has been built near the airport.