

MARK SCHEME

GCSE

CHEMISTRY

AQA - COMBINED SCIENCE

C10 - TEST 2
USING RESOURCES
Beginner

Mark schemes

- 1.** (a) Desalination 1
- Sterilising 1
- (b) Chloride ion 1
- (c) correct bar for NO_3^- 1
- (d) **D** 1
- (e) any **two** from:
 • people have the right to choose (opinion)
 • ethical / moral question
 • cannot be tested by experiment 2
- (f) $\frac{1.5}{4.0} \times 100$ 1
- (g) the percentage tooth decay increases with age 1
- by 4 % for each increasing age group 1
- (h) reduces tooth decay (for all age groups) 1
- greater reduction in older people 1
- [12]**
- 2.** (a) (i) monomers 1
- (ii) crude oil 1

(b) any **three** from:

- metal may not corrode away / remains
- plastic remains / does not break down (decay) / not affected by microorganisms
accept non-biodegradable
- should recycle / conserve resources / mend the kettle / burn (plastic) as a fuel
accept it is a waste of materials / resources
- landfill sites are limited / filling up
- water pollution
ignore harms wildlife / habitats or problems caused by burning the kettle

3

[5]

3.

(a) (water that is) safe to drink

allow suitable to drink
ignore filtered / purified / pure / clean

1

(b) to filter the water

or

to remove solid objects

allow to remove bacteria from the water
allow example of solids

1

(c) $29 \times 6 \times 2$

allow 1 mark for 174(p)
or (£)1.74

1

(£)3.48

1

(d) have to wait longer before you can use the water

allow have to wait 2 weeks before you can use the water

1

not portable (if concrete used)

1

(e) any **two** from:

- filters a lot of water per hour **or** high filtration rate
allow produces more clean water (in a given time)
- (concrete) heavy so cannot be knocked over / stolen
- higher reduction in pathogens (that cause diarrhoea)
allow 47% reduction instead of 31% reduction
- low maintenance
- faster (than SODIS) **or** don't have to wait 8 hours
- not weather dependent (like SODIS)
- needs replacing less frequently

2

(f) ozone
or
chlorine

allow boiling the water
allow distillation
allow sterilising tablets
allow gamma rays
ignore filtration / sunlight / heat

1

[9]