

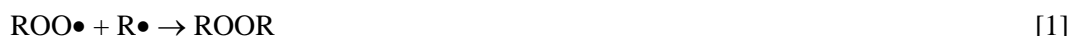
## Marking scheme for AHL Worksheet – Option F

**1** initiation:

## propagation:



## termination:



1 mark for each step with label

**2** free radical scavengers/quenchers: [1]

vitamin E/tocopherols/BHA/BHT/TBHQ [1]

chelating agents: [1]

(salts of) EDTA/extracts of rosemary/tea/ground mustard [1]

reducing agents: [1]

carotenoids/ascorbic acid/vitamin C [1]

**3** A is D [1]

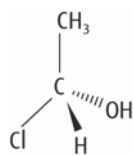
B is L [1]

C is L [1]

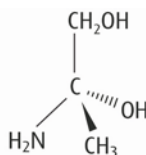
**4 a** X is S [1]

Y is R [1]

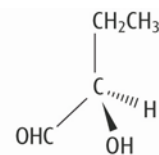
Z is S [1]

**b**

ent-X



ent-Y



ent-Z

[3]

- 5**     **a**     P: carotenoid [1]  
              Q: anthocyanin [1]
- b**     certain frequencies of light in the visible region of the spectrum are absorbed; [1]  
              complementary colours (in the visible region) are transmitted/reflected [1]
- c**     both have long conjugated systems of alternating single and double bonds / a delocalised system [1]  
              energy corresponding to frequencies of light in the visible region of the spectrum is absorbed to promote an electron to a higher energy level [1]