
Examiners' Report - Paper A (Chemistry)

The paper dealt with the detection of Salmonella by means of an antibody chemically linked to a label. Said label was a certain osmium complex. Document 1 referred to the detection of Salmonella by means of an antibody labelled with an acridinium compound. Document 2 concerned light emitting devices containing osmium complexes similar to the ones used in the present invention except for lacking the necessary linker groups.

In the following, any reference to certain pages and paragraphs in the paper refers equally to the version in each of the three languages.

Independent claims were expected directed to

1. The compound used to label the antibody, i.e. a tris(2,2'-bipyridine)osmium complex substituted with an ester of a C3- to C8-carboxylic acid and N-hydroxysuccinimide or N-hydroxyphthalimide (see the first half of the second paragraph on page 4).
2. To a method for making the same by reacting a tris(2,2'-bipyridine)osmium complex substituted with a C3- to C8-carboxylic acid with N-hydroxysuccinimide or N-hydroxyphthalimide (see the second half of the second paragraph on page 4).
3. To an antibody for Salmonella labelled with said osmium complex.
4. To a method for labelling an antibody with said osmium complex involving the steps listed in the first paragraph on page 5 of the paper.
5. To a method for detecting Salmonella using said labelled antibody and involving the steps listed on page 2 of the paper.
6. To the use of the compound of claim 1 as a label for an antibody for detecting Salmonella and to the use of the antibody of claim 3 in a process for detecting Salmonella.

7. To a test kit comprising a solid phase, the labelled antibody and an activating solution that causes the label to emit light.

As to 1.:

Candidates who just claimed the compounds of the formula depicted on page 4 earned fewer marks.

A less severe points deduction was given to those candidates who claimed the compounds of the formula depicted on page 4 with $n = 2$ to 7

Some candidates filed a claim to the osmium complex depicted on page 4 with $n = 3$ to 8. They should have realised that $n = 3$ to 8 corresponds to a carboxylic acid having 4 to 9 carbon atoms (including the $-\text{COOH}$ group), contrary to the paragraph preceding the formula in said paper, where the carboxylic acid is stated to have 3 to 8 carbon atoms.

It was not necessary to formulate the claim to the complex as a product by process claim and so fewer points were awarded for such a claim.

As to 2.:

Some candidates drew up a claim which also contained the known step for making the tris(2,2'-bipyridine)osmium complex substituted with a C3- to C8-carboxylic acid (see page 4, 2nd paragraph). This restriction was unnecessary and the claim gained fewer marks.

As to 7.:

The candidates should have realised that it was not essential that the activating solution had the specific concentrations defined in the second paragraph of page 5 of the paper. A more general disclosure for the activating solution was to be found on page 3, second and third sentences of the final paragraph.

Candidates who filed clearly invalid claims were penalised.

Up to 75 points could be obtained for the independent claims.

Dependent claims

could be directed to

- the compounds of the formula depicted on page 4;
- a labelled antibody where the antibody is an immunoglobulin, especially IgG;
- any preferred features mentioned on page 3 of the process for detecting Salmonella.

Up to 10 points could be obtained for the dependent claims.

Candidates who filed an abundance of dependent claims, which did not provide useful fallback positions, generally did not gain all the marks reserved for dependent claims.

The description should have contained a short reference of the relevant disclosures of documents 1 and 2, the definition of the differing feature and of the problem solved (i.e. the lower detection limit of the present process for detecting Salmonella as compared to the one of document 1; see the table on page 9 of the paper). The description should correspond to the requirements set out in Rule 27 EPC.

Up to 15 points could be obtained for the description.

the conduct of the examination, point 4.