Evidence for hazard
Potency

The lower the dose that can cause the adverse effect, the higher the score.
Most substances will cause adverse effects if we eat or absorb enough.
The MR assessment is based on the Acceptable Daily Intake (ADI) – expressed in μg/kg bw/day or No Observable Adverse Effect Level (NOAEL). If no ADI is available.

Typical evidence base: Identical to the evidence used for Hazard (A).

See also the general rules below (B) to be considered when scoring a substance for hazard and potency.

Estimate of the proportion of meat and animal products consumed that comes from animals which may have been treated

The higher the proportion of food that might come from a treated animal, the higher the score.
Some medicines are used only in a single species, while others are used in several, increasing the chance of exposure.

Typical Evidence Base: Standard Food Basket reports, Marketing Authorisations or label instructions (if black market) for veterinary medicines by species (provided that they relate to countries which exports that species to the UK).

Benchmark taken for % of diet: National Diet and Nutrition Survey 2008/09 – 2011/12: Mean g/week for men in 19-64 age group.

Estimate of frequency of dosing / percentage of animals within the herd treated when the product is administered correctly

Some medicines are used over a whole herd, while others are used to treat individual animals. Additionally, (e.g. for some endoparasites) sheep flocks might be treated a number of times during the year.

Typical evidence base: Label instructions on formulated medicines, reports from veterinarians on how medicines are used in the field, endemic diseases in countries with export to the UK for which the medicine is a popular treatment (data from veterinarians, PVO reports, climate-dependant diseases).

Evidence for high exposure groups, based on consumption of the species in which the medicine may be used

Where there are consumer groups who might be at particular risk a higher score is allocated.
Some groups might ingest a higher amount of a particular residue because of their pattern of consumption of foods. Higher scores will be allocated if there is a significant age or sex-related difference in consumption compared with the benchmark in Category C. Higher scores may also be allocated based on other strong anecdotal or circumstantial evidence.

Typical evidence base: Dietary groups within the population where their major source of protein comes from a single species or animal product.

Evidence for detectable residues, or suspicion of misuse coupled with insufficient residue monitoring data.

Where residues above legal or other limits have been detected, a higher score is allocated.
The greater the number of non-compliant residues for the particular substance, the higher the score allocated. Highest score may be allocated when either a residue has been confirmed for a substance for which no safe concentration has been identified; or no residue testing has been carried out.

Typical evidence base: Residue monitoring reports, RASFF notifications, PVO reports (including conclusions on the effectiveness of controls on VMP sales and prescription), ready on-line access to formulations and dosing instructions for unapproved species applications. (e.g. Alibaba.com, for China).

Matrix Ranking for Prioritising Testing of Veterinary Medicine Residues

Matrix Ranking Principles

In ‘Matrix Ranking’, specific criteria and weightings were developed, against which candidate substances were assessed. The Committee hopes stakeholders see this as an open and transparent system for prioritising the sampling.