



STOP

JULY 2020

THE SPREAD OF RESISTANCE

ANTICOAGULANT RESISTANCE PROJECT

AN ARMS RACE

Anticoagulants revolutionised rodent control in the 1950s but some rodents soon became resistant to them. The second-generation anticoagulants were introduced to overcome resistant rodents. But rats and mice resistant to some of these compounds are now widespread in the UK.

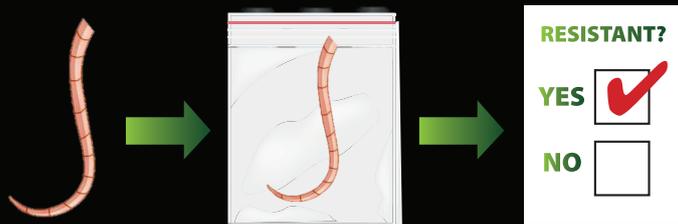
GENETIC MUTATION

Resistance is due to a single mutation in a rodent's DNA. Thanks to early genomic work we are able to identify resistant animals from a simple tissue sample (e.g. a tail cutting).



SEND IN TAILS FOR FREE RESISTANCE SCREENING

We can tell you which anticoagulants to avoid based on the mutations we find! The Campaign for Responsible Rodenticide Use (CRRU) is funding this service in the UK in collaboration with the **Animal and Plant Health Agency (APHA)** at Weybridge, Surrey.



INTERACTIVE MAPPING TOOL

Information from DNA resistance tests will be shared with the Rodenticide Resistance Action Committee (RRAC) to update a freely accessible interactive mapping tool for pest controllers!

THE MORE TAILS THAT ARE TESTED THE MORE INFORMATION WE CAN PUT ON THE MAP!

(<http://guide.rrac.info/resistance-maps/united-kingdom>)



PLEASE SEE THE SAMPLE COLLECTION PROTOCOL (OVERLEAF) FOR DETAILS ABOUT SENDING IN A TAIL SAMPLE FOR RESISTANCE SCREENING

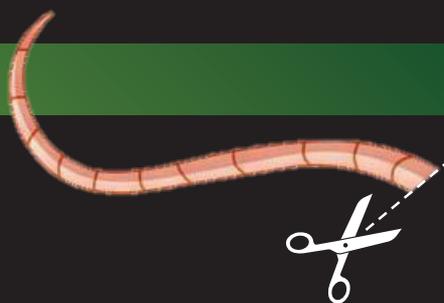
TAIL SAMPLE COLLECTION PROTOCOL (PLEASE READ CAREFULLY)

- Collect 1-3 tails per site. If a tail fails testing you will be invited to send a maximum of 3 replacement tails.
- Collect tails from preferably freshly trapped/shot rodents. Fresh, clean and intact bodies are needed for tests to work. If you suspect bodies are not in good condition, do not use them.

THREE EASY STEPS

1. CUT

A tail tip (2-3 cm) is required to provide DNA from each rodent. Each tail tip must be removed using a clean blade or sturdy scissors.



2. DOUBLE BAG

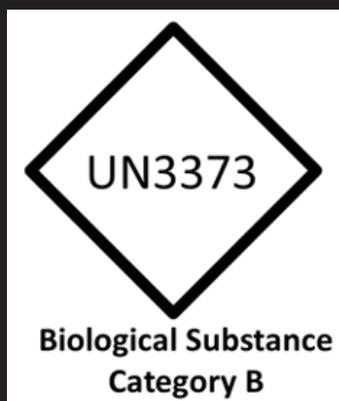
Each tail tip should be DOUBLE-BAGGED i.e. put into one sealed plastic bag (e.g. Zip-Lok) and then put inside ANOTHER similar sealed bag.

Your information should be put inside each outer bag as shown here:

Name: [your name]
Date: [date the tail was collected]
Species: [Norway rat / House mouse]
Site Postcode: [postcode of the site or GPS co-ordinates]
Email: [your personal or work email]

3. POST

- If you cannot post the tail the same day, put it in the freezer no later than 12 hours after it was collected.
- When you are ready to post, put the bag containing the tail into a padded outer envelope (e.g. a Jiffy Bag), minimum size 10 cm x 10 cm.
- Fix the UN3373 diamond to the back of the envelope. A printable version of the diamond, of the correct size (i.e. not less than 5 cm on each side), is available from the CRRU UK website or via the QR code.
- Write your name and address on the back of the envelope.
- Post only on a Monday, Tuesday or Wednesday.
- Address the envelope as shown below and post by first class Royal Mail.



EXAMPLE – DO NOT USE

Print version of approved size is available for download from:
www.thinkwildlife.org/downloads/



SCAN THE QR CODE TO DOWNLOAD THE UN3373 BIOLOGICAL SUBSTANCE CATEGORY B

REMEMBER TAILS MUST BE SENT WITHIN 12 HOURS OF COLLECTION OR FROZEN AND SENT LATER TO:

Dr Richard Ellis
Central Sequencing Unit, APHA Weybridge, New Haw, Addlestone, Surrey KT15 3NB. Tel: 02078955876
Email: Sequencing.Facility@apha.gov.uk
Web: www.gov.uk/apha

Note: If your samples are from a location within a 5km radius of an existing data point then the samples may not be analysed free of charge. If you would like to check whether you are near any resistance go to RRAC's online interactive questionnaire and map:
<http://guide.rrac.info/resistance-maps/resistance-maps/>.