

SALT IODIZATION TESTING

SURVEY COORDINATORS:

TRANSLATE THIS CHAPTER INTO THE LOCAL LANGUAGE, IF NECESSARY. ENSURE THAT THE INFORMATION IN THIS CHAPTER IS APPROPRIATE TO YOUR SURVEY. SOME COUNTRIES MAY NEED TO GIVE SLIGHTLY DIFFERENT INSTRUCTIONS, DEPENDING ON THEIR CUSTOMIZED QUESTIONNAIRES.

SALT IODIZATION TESTING

Salt testing is to be carried out at the time of the administration of the Household Questionnaire, by the interviewer. For this purpose, each interviewer should carry a salt iodization test kit. The kit contains a solution that will cause the salt sample to change colour if iodine is present in the salt.

There are two different types of salt testing kits; one type for salt fortified with potassium *iodate* and one type for salt fortified with potassium *iodide*.

Test kits for potassium iodate will be required for most countries, although in a few countries test kits for potassium iodide will be needed. Find out what fortificant is used in your country and ensure that the correct test kits are procured for the survey.

In the case that both fortificants are used in a country (that is, salt with potassium iodate *and* with potassium iodide are both available in the country), then both types of test kits should be procured for the survey. During the testing in the household, the interviewer may start with the test kit that tests for the most common fortificant used in the country.

In MICS4, as in previous MICS rounds, salt containing 15 parts per million (ppm) or more of iodate/iodide is considered adequately iodized. This is in accordance with the internationally agreed indicator for iodized salt consumption. It is therefore important that the salt testing kits used in MICS4 surveys have a cut-off point of 15 ppm, even if a different cut-off point is commonly used in the country. Furthermore, every effort should be made to use only those kits that have a single cut-off; in other words, the solution in the kit should distinguish only between less than 15 ppm versus 15 ppm or greater, in addition to 0 ppm. The reason for this recommendation is that because the test is based on the interviewer's perception of colour change, and trying to determine more than two colour variations could bias the results.

During the training, each interviewer should practice salt testing on variety of salt samples, including salt samples iodized with the fortificant used in the country (potassium iodate (KIO₃) and/or iodide (KI)), as well as salt that has not been iodized (0 ppm).

The salt testing kits contain small 10 ml bottles with a stabilized starch-based solution. Each kit is sufficient for testing at least 100 samples of salt. One to two drops of the solution dripped on a small amount of salt containing iodine produces a blue/purple colour change. Coloration indicates that iodine is present.

Below follows a brief description of the basic steps to test for *iodate* content in salt, the most common fortificant. The same basic principles also apply when testing for *iodide* content in salt, with the main difference being that no re-check solution will be needed with that type of salt.

1. Put a small amount of salt (about a teaspoon or less) on a white piece of paper. Make a small pile and flatten the top.
2. Add 1-2 drops of test solution and check the result **immediately** in good light, using the colour chart supplied with the test kit.
3. When no colour appears (suspected alkalinity in the salt sample); on a fresh sample of salt, add up to 5 drops of the **re-check solution** supplied with the kit and then add 2 drops of test solution on the same spot and compare to the colour chart.
4. When you have compared to the colour chart, circle on the questionnaire the code that corresponds to the test outcome (See MICS Chapter 'Instructions for Interviewers').

ORDERING SALT TESTING KITS

In order to standardize the results of all MICS4 surveys, it is recommended that all countries use the same test kit, manufactured by MBI Kits International in India. Other test kits may be used in addition, but these should not replace the MBI kits.

Salt test kits testing for potassium *iodate* content in salt can be ordered through UNICEF's Direct Ordering Scheme from MBI Kits International in India.

Salt test kits testing for potassium *iodide* content in salt can be ordered through UNICEF Supply Division in Copenhagen.

Make sure to order salt testing kits well in advance, as the lead time is often long. Be sure to order plenty of kits. Calculate sufficient kits for the pretest, main fieldwork training, the pilot and main fieldwork, as well as additional kits in case of over-runs.