

NASR FFQ

Quality Assurance Guidelines for Paper FFQs

Introduction

The NASR paper FFQ is a 12-page booklet. Blank booklets are purchased from NASR. Completed booklets are sent back to NASR to be scanned (i.e., read by an optical scanner) and processed (to generate nutrient output). Once the FFQs have been scanned and processed, the user receives notification that the data are available for download from the NASR secure study portal (<https://nasr.fhcrc.org>) and the paper FFQ booklets are returned.

For information about the processing system and output datasets, refer to the **FFQ Technical Documentation (GNA/MNA)** available on the NASR website (<https://fredhutch.org/nasr>, located in the FFQ section under “Data Analysis Resources”). Key information related to quality assurance can be found under *Error Checking* on pg. 15.

This document describes quality assurance (QA) guidelines for the NASR paper FFQ. There are three sections: 1) general considerations, 2) procedures to follow before sending completed FFQ booklets to NASR for scanning/processing, and 3) procedures to follow after downloading processed FFQ output files.

General considerations

1. **FFQ QA Lead.** Designate a “FFQ QA Lead” for your study. Ensure that this person is familiar with the guidelines described in this document, and responsible for conducting/overseeing the QA activities.
2. **Batch Size.** NASR can scan/process up to 150 FFQs at a time, but smaller batches of 50 or less are best for the first few batches. Smaller batches are recommended at first so that new users become familiar with the quality assurance measures necessary for successful scanning and processing.

Before sending completed FFQ booklets to NASR for scanning/processing

1. Conduct a general review:

- Do not fold FFQs.
- Do not burst (term for separating at the perforations) the FFQs. Send them intact.
- Remove any added staples, paperclips or Post-it notes.
- Completely fill circles with dark pencil. If marked in pen, completely cover with dark pencil.
- Do not erase mistakes; instead, use thin correction tape.
 - A sample correction tape was included with your first FFQ order.
 - Contact us (nasr@fredhutch.org) with any questions about what correction tape to use.
- Do not use correction fluid (e.g., liquid Wite-Out).
- Do not mark (and do not use correction tape) on or near the pre-printed black marks along bottom and sides of the booklet.
- FFQs must not have frayed, torn or curled edges. They should not have damage from water, food or beverages.
- Labels may be used, but they must be 1 inch from any side of the booklet. Labels should be thin with no raised edges. **IMPORTANT: Please contact NASR before using labels.**

2. Review each FFQ for completeness and errors:

- Check that there are no blank pages.
- Check that all **adjustment** questions are answered (FFQ pages 2 & 3).
- Check that all **summary** questions are answered (FFQ page 10).
- Check that there are no double marks where only one answer is permitted. If so, cover incorrect response with correction tape (described above).
- Check all erasures. If erasures are not complete or if there are smudge marks, use correction tape.

After downloading processed FFQ output files & receiving returned FFQ booklets

1. Review the Error Report and returned FFQ booklets:

Review the Error Report and returned FFQ booklets to identify questionnaire completion errors. Use this information to improve your QA technique to avoid errors in future batches. The following types of errors are reported:

- Multiple marks when only one is allowed
- Missing values when a value is required
- Food Sections with less than half the foods marked

Note that incomplete erasures can trigger the scanner to show a multiple mark error. Covering erasures with correction tape prevents this error.

2. Review the Error Report Pass/Fail Outcome:

Review the Error Report Pass/Fail Outcome to determine if post-scanning edits and reprocessing are necessary.

If errors are detected on a questionnaire, processing is still completed. It is the responsibility of the researcher to determine the severity of the errors and whether a given FFQ should be considered "acceptable." However, the processing system does provide the outcome of a pass/fail test which is included on the Error Report as a reasonable guideline for acceptability.

Any one of the following errors will generate a "fail" outcome:

- One or more illegal multiple mark response (this can be a food frequency, a portion, a summary, or an adjustment question)
- One or more missing summary question
- One or more bad page number (i.e. booklet IDs don't match)
- More than half the foods in a section are missing
- Illegal missing responses for three or more adjustment questions

Evaluate these errors and how they may affect your research focus to determine if post-scanning edits and reprocessing are necessary. To do this, examine which defaults are used for the questions with errors and whether these could have a meaningful impact on your results (as noted above, see ***FFQ Technical Documentation (GNA/MNA)***). Note:

- A missing food item is assumed not to be eaten, and missing portion sizes are assumed to be medium. In general, these types of errors do not require correction.
- Missing summary questions are serious and will affect estimates of fat, fruits and vegetables.

If post-scanning edits and reprocessing are necessary:

Obtain the needed information from the participant, correct erasures and/or multiple marks with correction tape, and then send corrected FFQs back to NASR for rescanning/reprocessing. Additional fees apply (i.e., the processing fee will be charged for any FFQs returned for rescanning/reprocessing).