

Title: Microbial Attributes Testing of Non-Sterile Solid Oral Dosage Forms and Materials					
Guidance Number: 110					
Prepared by:		Date:		Supersedes:	
Checked by:		Date:		Date Issued:	
Approved by:		Date:		Review Date:	

**Microbial Attributes Testing of Non-Sterile Solid
Oral Dosage Forms and Materials**

Introduction

The intention of this document is to provide guidance to determine the need for performing microbial attributes testing of drug product raw materials, non-sterile excipients, active pharmaceutical ingredients (APIs), and finished drug products. This guidance is recommended in order to ensure the microbiological quality of any non-sterile solid oral dosage form.

It is not mandatory to examine the microbial quality of drug product raw materials, non-sterile excipients, APIs, and finished solid oral drug products unless required by the compendia or a regulatory filing. However, a microbial assessment should be performed on all raw materials, non-sterile excipients, APIs, and finished drug products that are *not* required to be tested by compendia or regulatory filing.¹ This assessment will determine if microbial attributes testing is warranted.

Microbial attribute testing estimates the number of and/or types of microorganisms present in a sample of material or product by utilizing the total aerobic bacterial count test, the total yeast and mold count test, or the presence of specified microorganisms test. Because of the wide diversity of materials and finished solid oral drug products, not all products are equally susceptible to microbial contamination, and therefore, microbial attributes testing may not be the same for all products. This guidance has been developed to help determine the need for microbiological testing.

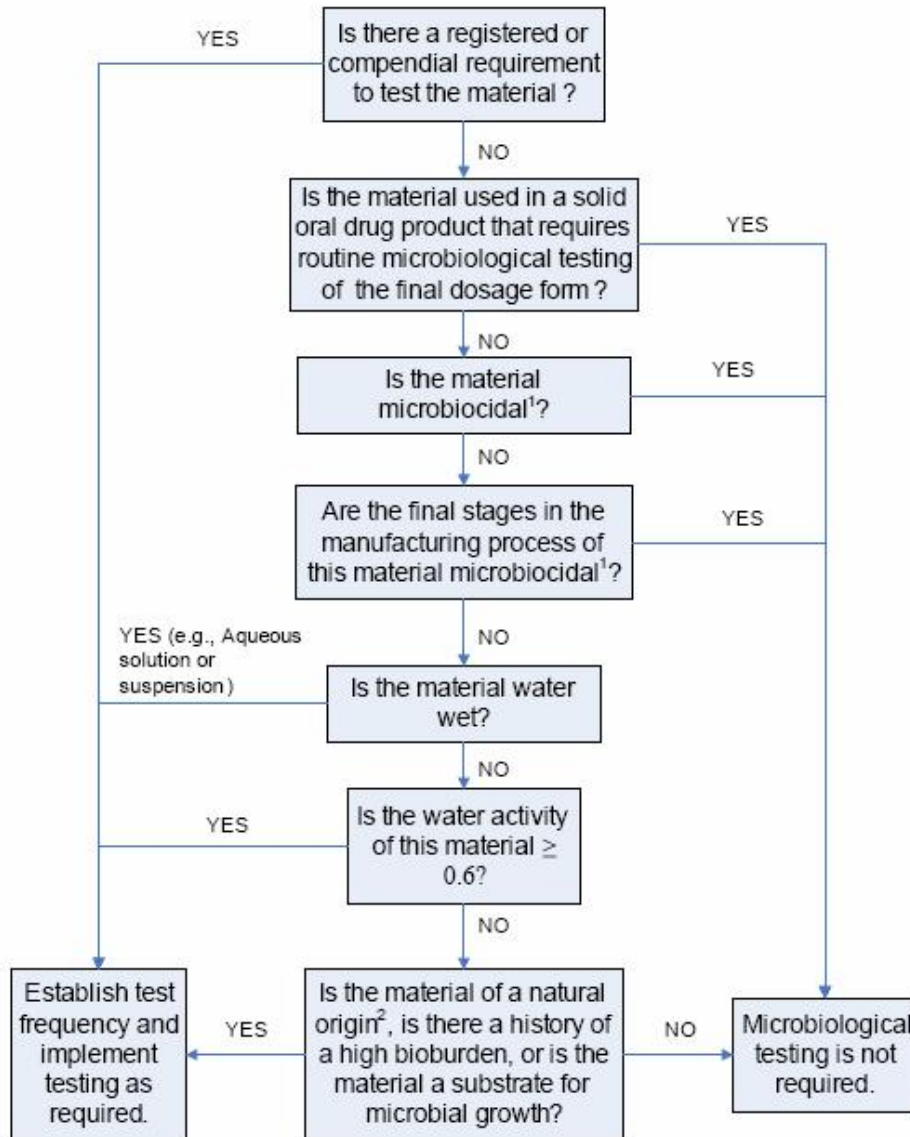
Recommendations

Materials:

The raw materials, non-sterile excipients, and APIs of a solid oral dosage form are considered a potential major source of microbiological contamination in pharmaceutical products. Consequently, a risk assessment of each material is recommended to determine if microbial testing is appropriate. In order to assess each material used in the manufacture of non-sterile solid oral dosage forms, a decision tree has been appended to this guidance (see figure 1).

This decision tree is based upon such factors as regulatory requirements, material source, water activity, inherent inhibitory or antimicrobial properties, nutrients available for growth, historical bioburden data, and the manufacturing process of the material. A rationale for the decision to test or not to test can be generated based upon this decision tree. If it has been determined that testing of a raw material is needed,

Figure 1. Testing rational for excipients and non -sterile APIs used in the manufacture of non -sterile solid oral dosage forms



1 Microbiocidal is defined as being an organic solvent or strong acid /base (pH ≤ 3 or ≥ 10) or exposed to these materials or high temperature conditions (>121 °C for ≥ 15 min.).

2 Natural origin is defined as not chemically modified. (e.g., extraction or purification.). APIs are not considered of a natural origin .