

CHAPTER 13

INDOOR ENVIRONMENTAL QUALITY

INTRODUCTION

The indoor environment is the result of the interactions of many factors - the building's location, area climate, construction methods and materials, renovations, occupant activities, and furnishings, to name a few. With the focus on energy conservation in the 1970's came the idea that "tighter is better." Buildings were constructed to prevent air infiltration, but there was usually no compensation for the loss of natural ventilation. Employees in office spaces began to complain of symptoms that they associated with being at work, beginning the era of evaluating occupational health issues associated with non-industrial work environments. Over the last several years, indoor environmental quality (IEQ) concerns have increasingly focused on biological contamination, especially molds and their metabolic by-products.

This chapter is not meant to be an exhaustive or exclusive IEQ reference. It is a consolidation of the most current information, guidelines, and references, and provides general procedures to assist you with evaluations. Further, it gives you the resources to obtain more in-depth information if needed. Sections 13.2 – 13.7 have been added to this chapter in response to the growing number of requests for Navy guidance specific to mold evaluations. For more detailed information, Section 13.8 provides a comprehensive resource and reference list.

Section 13.1 **General IEQ Investigations**

Appendix 13.1-A	IEQ Concern Form; IEQ Questionnaire
Appendix 13.1-B	Occupant Diary/Symptom Log
Appendix 13.1-C	Sample Occupant Interview Form; Sample Interview Questions
Appendix 13.1-D	Sample Walk-Around Inspection Checklist
Appendix 13.1-E	Sampling Methods
Appendix 13.1-F	HVAC Checklist – Short Form
Appendix 13.1-G	Indoor Air Contaminant Guidelines

Section 13.2 **Mold and Other Biological Contaminant Assessments: Investigating, Sampling, and Interpreting Results**

Figure 13.2-1	Bioaerosol Collection Methods
Appendix 13.2-A	Microbiological Collection Methods by Analyte
Appendix 13.2-B	Mycotoxins

[Section 13.3](#)

Mold Cleanup, Remediation, and Clearance Sampling

Table 13.3-1 Mold Remediation Containment Guide

[Figure 13.3-1](#) Mold Remediation Wheel

[Figure 13.3-2](#) Clearance Sampling Process

[Appendix 13.3-A](#) Commonly Used Indoor Antimicrobial Products

[Section 13.4](#)

Mold Investigation Medical Guidance

[Section 13.5](#)

Risk Communication

[Section 13.6](#)

Resources