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Workplace air — Guidance for the measurement of respirable crystalline silica

Air des lieux de travail — Lignes directrices pour le mesurage de la fraction alvéolaire de la silice cristalline



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Foreword

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ISO 24095 was prepared by Technical Committee ISO/TC 146, *Air quality*, Subcommittee SC 2, *Workplace atmospheres*.

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Introduction

Respirable crystalline silica (RCS) is a hazard to the health of workers in many industries through exposure by inhalation. Industrial hygienists and other public health professionals need to determine the effectiveness of measures taken to control workers' exposure. Taking samples of air during a work activity and then measuring the amount of RCS present is often done to assess the exposure of an individual, the effectiveness of their respiratory protection or effectiveness of other controls. Studies have found significant problems can be encountered if procedures to ensure the quality of RCS measurements are not followed. In addition, there is interest in accurately measuring RCS at lower levels where the variability of measurements is poorer. If proper controls to limit bias and measurement variability are not employed, a reasonable measurement uncertainty cannot be achieved and usefulness of RCS measurements to make informed decisions to protect worker health is reduced. This International Standard is intended to be of benefit to those involved in the determination of RCS in the workplace, e.g. agencies concerned with health and safety at work; industrial hygienists; safety and health professionals; analytical laboratories; industrial users and their workers. Readers should be aware that in some countries there are legal requirements for the quality assurance of these measurements.