



Standard Practices for Preserving and Transporting Rock Core Samples¹

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1. Scope*

1.1 These practices cover the preservation, transportation, storage, cataloging, retrieval, and post-test disposition of rock core samples obtained for testing purposes and geologic study.

1.2 These practices apply to both hard and soft rock, but exclude ice and permafrost.

1.3 These practices do not apply to those situations in which changes in volatile gas components, contamination of the pore fluids, or mechanical stress relaxation affect the intended use for the core.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *This practice offers a set of instruction for performing one or more specific operations. This document cannot replace education or experience and should be used in conjunction with professional judgement. Not all aspects of this practice may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of a project's many unique aspects. The word "Standard" in the title of this document means only that the document has been approved through the ASTM consensus process.*

1.6 *This standard does not purport to address the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

D420 [Guide to Site Characterization for Engineering Design and Construction Purposes](#) (Withdrawn 2011)³

D653 [Terminology Relating to Soil, Rock, and Contained Fluids](#)

D2113 [Practice for Rock Core Drilling and Sampling of Rock for Site Investigation](#)

D4220 [Practices for Preserving and Transporting Soil Samples](#)

2.2 API Standard:

API RP-40 [Recommended Practice for Core Analysis Procedure](#)⁴

3. Terminology

3.1 *Definitions*—See Terminology D653 for general definitions.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *critical care*—samples which are fragile or fluid or temperature sensitive. This protection level includes the requirements prescribed for routine and special care.

3.2.2 *routine care*—non-sensitive, non-fragile samples for which only general visual identification is necessary, and samples which will not change or deteriorate before laboratory testing.

3.2.3 *soil-like care*—materials which are so poorly consolidated that soil sampling procedures must be employed to obtain intact pieces of core.

3.2.4 *special care*—fluid sensitive samples and those which must later be subjected to testing. Requirements for this level of protection include those prescribed for routine care.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from American Petroleum Institute (API), 1220 L. St., NW, Washington, DC 20005-4070, <http://www.api.org>.

¹ These practices are under the jurisdiction of ASTM Committee D18 on Soil and Rock and are the direct responsibility of Subcommittee D18.12 on Rock Mechanics. Current edition approved July 1, 2008. Published July 2008. Originally approved in 1990. Last previous edition approved in 2006 as D5079 – 02 (2006). DOI: 10.1520/D5079-08.