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**Traditional Chinese medicine —  
Computerized tongue image analysis  
system —**

**Part 1:  
General requirements**

*Médecine traditionnelle chinoise — Système d'analyse d'images  
numérisées de la langue —*

*Partie 1: Exigences générales*

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# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Components of CTIS</b> .....	<b>2</b>
<b>5 Technical requirements</b> .....	<b>2</b>
5.1 General.....	2
5.2 Tongue positioning.....	2
5.3 Lighting part.....	2
5.4 Image acquisition part.....	3
5.4.1 General.....	3
5.4.2 Spatial resolution.....	3
5.4.3 Colour components.....	3
5.4.4 Colour components acquirement.....	4
5.5 Data processing part.....	4
5.6 Display.....	4
<b>6 Safety</b> .....	<b>4</b>
6.1 Safety of material.....	4
6.2 Prevention from infection.....	4
6.3 General requirements for testing of ME equipment.....	4
6.4 Electrical hazards.....	5
6.5 Mechanical hazards.....	5
<b>Annex A (informative) Tongue positioning</b> .....	<b>6</b>
<b>Annex B (informative) Test methods for CTIS</b> .....	<b>7</b>
<b>Annex C (informative) Data processing part</b> .....	<b>9</b>
<b>Bibliography</b> .....	<b>11</b>

## Foreword

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Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

This corrected version of ISO 20498-1:2019 incorporates the following corrections:

- edition date in the running header changed to 2019;
- copyright date in the footer changed to 2019.

## Introduction

The tongue's colour, form, motion, substance and coating are the main factors to be considered when analysing tongue features. Measuring the geometric shape involves observing the changes in the thickness and size of a tongue and the cracks and teeth marks on its surface. The important features of the tongue coating which cover the surface of the tongue are colour, degree of wetness, thickness, form and distribution.

Although tongue diagnosis is convenient and non-invasive, it is difficult to achieve an objective and standardized examination. Differences in inspection circumstances, such as light source or a client's posture, affect the result significantly. Moreover, as the diagnosis relies on the observer's experience and knowledge, it is hard to obtain a standardized result. Recently, many research projects have attempted to solve these problems, and various types of computerized tongue image analysis system (CTIS) have been developed.

Various cameras, such as a commercial digital camera, bayer charge-coupled device (CCD) camera, high-performance 3CCD camera and a hyperspectral camera, were used for the CTIS. Recently, a multi-view CTIS has been developed designed for 3D tongue modelling and sublingual vein acquirement, comprising 3D CTIS.

Different CTIS technologies have unique advantages and specificities according to the application and diagnostic environment, but this variation may cause inconsistent diagnoses in practical clinical application. To improve CTIS performance and clinical approach, it has become necessary to develop an International Standard for the functions and elements of a CTIS.

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