

RUO

MYCOBIOTA

Solution

Rev. 00/2022

MYCOBIOTA SOLUTION

Clinical Relevance

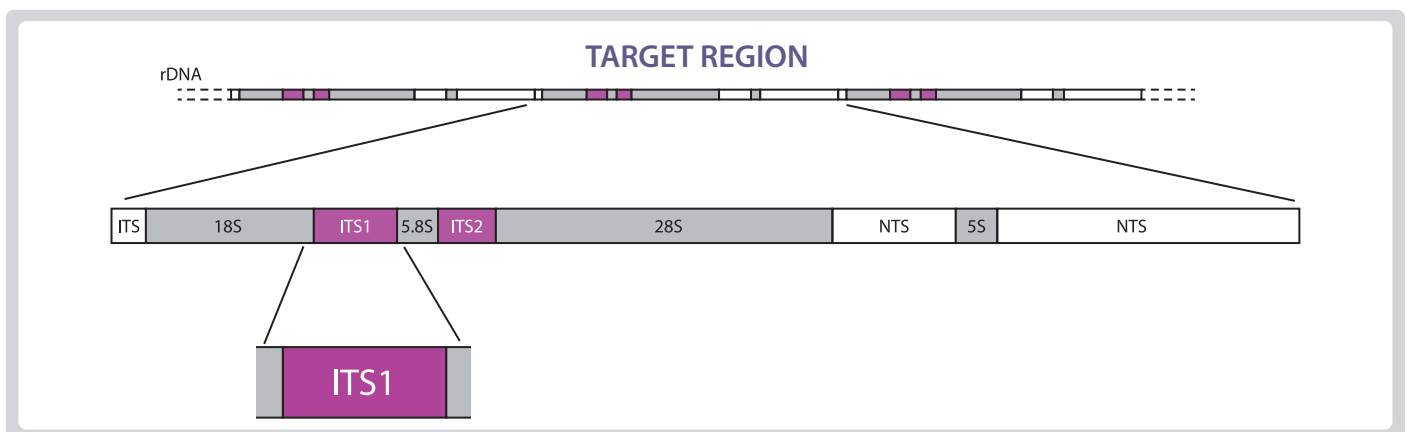
Fungi are a key component of the human microbiota along with bacteria. The composition of the fungal community, MYCOBIOTA, is able to modify and alter a series of physiological conditions in humans such as the acquisition of energy, the availability of vitamins and cofactors, xenobiotic metabolism, the development and functions of the immune system and even the development of the nervous system. Several data reveal that many pathological conditions are closely related to alterations in the fungal community. Recent studies have shown the correlation between these alterations and the mechanisms of colorectal carcinogenesis. Furthermore, fungal infections represent an increasing health problem, leading cause of morbidity and mortality in immunocompromised individuals.

Having a standardized test for the analysis of the mycobiota in the clinical setting can help identify fungal profiles already associated with specific diseases and is useful in identifying new fungal profiles, regardless of the morphological-cultural analyzes that often require a long time, have a low sensitivity and are strictly dependent on the experience of the operators.

The use of a standardized diagnostic test can facilitate the study of corrective therapies. The possibility of making an early diagnosis can determine the success of the treatment. In fact, although there are numerous effective antifungal drugs available, the treatment of invasive mycoses is often limited due to few diagnostic options.

Intended Use

The Mycobiota Solution kit is an *in vitro* device based on the amplification of nucleic acids by PCR ("Polymerase Chain Reaction") of the ITS1 region of the fungal rDNA, for the qualitative evaluation of human intestinal mycobiota and other types of samples (eg. vaginal swab, sputum, skin swab, buccal swab, urine), starting from a sample of fungal genomic DNA, followed by sequencing in Next Generation Sequencing (NGS).



Sample Type

- ✓ Stool
- ✓ Rectal swab
- ✓ Vaginal swab
- ✓ Skin swab
- ✓ Oral swab
- ✓ Saliva
- ✓ Sputum
- ✓ Urine

Performance Features

- ✓ Library preparation within 8 hours
- ✓ DNA input: 5-50 ng/μl
- ✓ Data analysis can be performed with dedicated software (developed by SmartSeq S.r.l.)

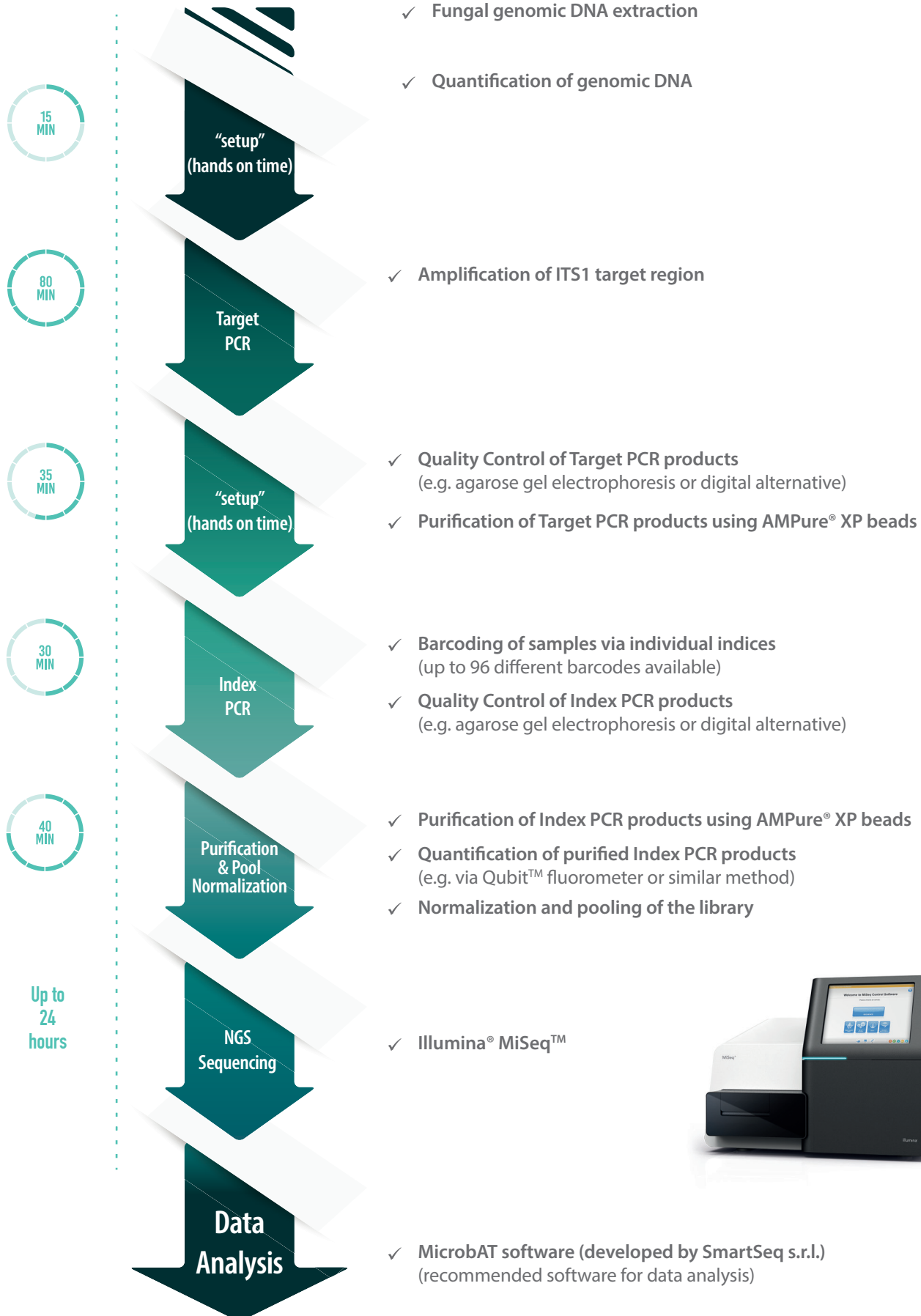
NGS Instruments

- ✓ Illumina® MiSeq™

RNA Extraction – Validated Methods

- ✓ QIAamp® PowerFecal® Pro DNA Kit (Qiagen)
- ✓ QIAamp® Fast DNA Stool Mini Kit (Qiagen)
- ✓ QIAamp® DNA Microbiome Kit (Qiagen)
- ✓ Any other extraction method available in the laboratory can be used after user validation.

Workflow Overview



We recommend evaluating any data obtained by always referring to a patient's clinica history and other diagnostic information available to best interpret the results of the microbial profile.

Performance

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Sequencing Information

Illumina® Kit	Number of samples	Sequencing time (Illumina® Official Data)
MiSeq™ Reagent Nano Kit v2 (500 cycles) - cod: MS-103-1003	24	~ 28 h
MiSeq™ Reagent Kit v2 (500 cycles) - cod: MS-102-2003	96	~ 39 h

Ordering Information

Cat. No.

AD4SEQ	Mycobiota Solution	48 rxns	AD-005.048
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