Liofilchem®

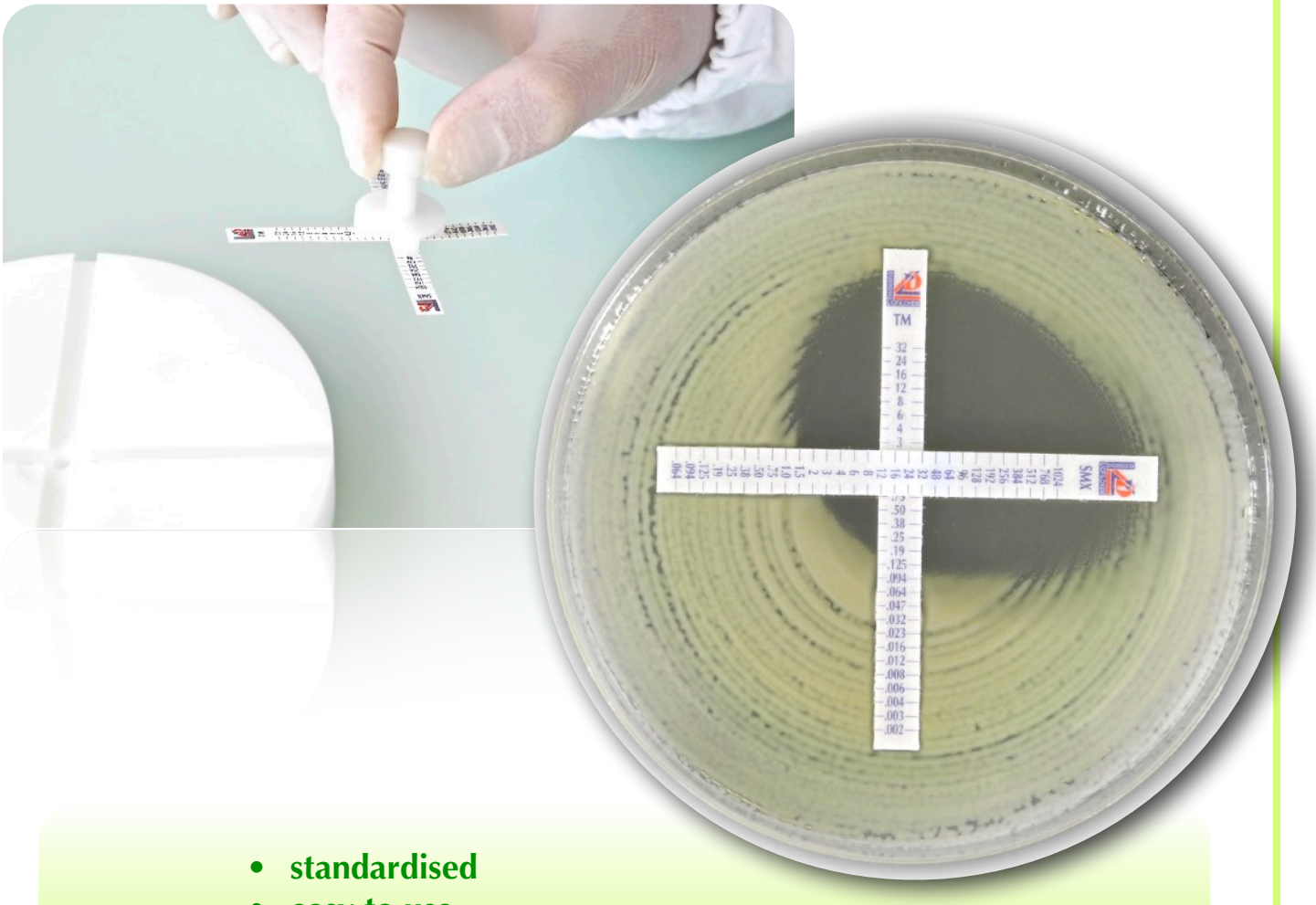
MTS-SAS™

MIC Test Strip Synergy Applicator System

(US patent US9365886B2)

MTS-SAS combines the reliability of MIC Test Strip with patented tools to facilitate and standardize a critical assay such as the *in-vitro* combination of antibiotics.
Antimicrobial resistance is a major challenge for clinicians and clinical microbiologists, the use of synergy testing is nowadays increasingly requested.

MTS-SAS procedure is significantly faster than any other methods in antibiotic synergy tests (i.e. time-kill, checkerboard), does not require any additional trainings to those who are skilled in the usage of MIC Test Strip, reduces or eliminates the risks of procedure errors when compared to laborious and complicated traditional methods.



- **standardised**
- **easy to use**
- **save time, materials, workload, resources**

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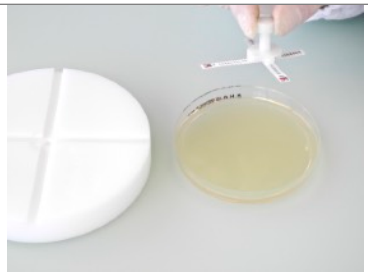
Method

1. Perform standard M.I.C. of drugs A and B prior to synergy set-up.
2. Use the "MTS Synergy Applicator System"* for the synergy testing.
3. Take a MTS (MIC Test Strip) of the first antibiotic (A) with the tweezers and place it on the MTS Synergy Applicator Platform according to position 1.
4. Adjust the MTS (antibiotic A) such that the the MIC value of the first antibiotic (MIC_A) is positioned at the base intersection.

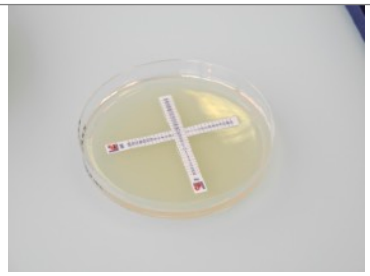
5. Take a MTS of the second antibiotic (B) with tweezers and place it on the base according to position 2.

6. Adjust the second MTS (antibiotic B) such that the MIC value of the second antibiotic (MIC_B) is positioned at the base intersection and intersects MTS-antibiotic A at its MIC value.

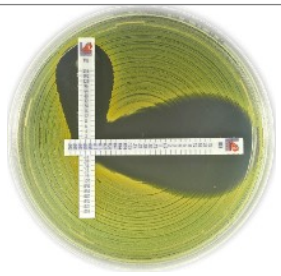


7. Use the MTS Synergy Delivery Tool, press hard onto the two carefully positioned MTS (A and B) and move them to the agar plate.

8. Carefully place the MTS Synergy Delivery Tool (with MTS_A and MTS_B) on the agar.
9. Wait until the strips are completely moistened by surface of the agar.



10. Remove the MTS Synergy Delivery Tool from the agar plate leaving MTS_A and MTS_B positioned at 90°. If necessary, use the tweezers to push the strips onto the agar surface.
11. Finally incubate according to the standard MTS procedure for the specific microorganism.



12. Interpret the results visually or by FIC calculation:

FIC Index = MIC_{AB}/ MIC_A+ MIC_{BA}/ MIC_B
Synergy FIC ≤ 0.5
Additive FIC > 0.5 and ≤ 1.0
Indifference FIC > 1 and ≤ 4
Antagonism FIC > 4

* MTS Synergy Applicator System (US patent US9365886B2): A device for standardising the *in-vitro* synergy testing of two antibiotics through the method of crossing the gradient strips. (Liofilchem, 2012).

MTS Synergy Application System

Description	packaging	ref.
MTS Synergy Applicator Platform	1 base	96860
MTS Synergy Delivery Tool	10 disposable applicators	96870

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