

Technical requirements for performing new_diagnostics *Arxula adenivorans*- and *Saccharomyces cerevisiae*-based bioassays

Basic Equipment

- Autoclave, Incubator, Microliter centrifuge, Mixer for reaction tubes, Single channel pipettes (volume range from 10 μ l to 5 ml), Consumables (reaction tubes, Falcon tubes, pipette tips, pipette trough etc.), Lab-PC or Laptop

Special Equipment

Multi-channel-pipette (8-channel)

- Multi-channel-pipettes from Eppendorf, Brand, Gilson and other manufactures are suitable. The necessary volume range for performing the test is 10 μ l to 300 μ l. For working with multi-channel-pipettes suitable troughs are essential.

Incubation shaker

- For cultivation of the recombinant yeasts a suitable incubation shaker is mandatory. Shakers with an orbit from at least 3 mm to 25 mm are recommended. A combination of a small single shaker without incubation function with an additional incubator is possible. Table 1 gives a brief summary about appropriate shaker specifications for the new_diagnostics yeast-based tests.

Centrifuge for microtiter plates*

- Separation of supernatant from cultivated cells in a deep well plate is accomplished through a centrifuge with a microtiter plate rotor.

Photometer/Reader for microtiter plates

- For the measurement of optical densities, a microtiter plate reader (Tecan, BioTek, Eppendorf etc.) with filters for 405 nm, 580 nm** and 630 nm (alternative 600 nm, 620 nm) is essential. For *Arxula adenivorans* lumi tests a microplate reader for luminescence detection is essential.

*Only for conventional *Arxula adenivorans* based tests systems

**only for *Saccharomyces cerevisiae*-based tests, for S-YES^{basic} a photometer should be used.



Table 1: Recommended shaker speed as a function of shaker orbit for performing new_diagnostics yeast-based tests.

Orbit	Rotation Speed	Type of Movement	Test
3 mm	750 rpm	orbital (vortex)	e.g., A-YES, A-YAS, A-YPS, A-YBS, A-YMS, A-YDS, A-YGS, S-YES ^{MD} , <i>Arxula</i> lumi tests
3 mm	900 rpm	orbital	e.g., A-YES, A-YAS, A-YPS, A-YBS, A-YMS, A-YDS, A-YGS, S-YES ^{MD} , <i>Arxula</i> lumi tests
3 mm	1100 rpm	orbital (planar)	e.g., A-YES, A-YAS, A-YPS, A-YBS, A-YMS, A-YDS, A-YGS, S-YES ^{MD} , <i>Arxula</i> lumi tests
4,5 mm	750 rpm	orbital (vortex)	e.g., A-YES, A-YAS, A-YPS, A-YBS, A-YMS, A-YDS, A-YGS, S-YES ^{MD} , <i>Arxula</i> lumi tests
4,5 mm	900 rpm	orbital	e.g., A-YES, A-YAS, A-YPS, A-YBS, A-YMS, A-YDS, A-YGS, S-YES ^{MD} , <i>Arxula</i> lumi tests
4,5 mm	1200 rpm	orbital (vortex)	μ A-YES
15 mm	500 rpm	orbital	A-YES, A-YAS, A-YPS, A-YBS, A-YMS, A-YDS, A-YGS
19 mm	480 rpm	orbital	A-YES, A-YAS, A-YPS, A-YBS, A-YMS, A-YDS, A-YGS
20 mm	450 rpm	orbital	A-YES, A-YAS, A-YPS, A-YBS, A-YMS, A-YDS, A-YGS
25 mm	380 rpm	orbital	A-YES, A-YAS, A-YPS, A-YBS, A-YMS, A-YDS, A-YGS

