**Ames MPF® 98/100**

**Ames MPF™ PENTA I/II**

**Ames MPF™ Aqua**

Ames MPF® mutagenicity assay is a miniaturized modification of the Ames fluctuation assay and is based on the same principle as the agar plate test (OECD 471), but offers several advantages.

Large range of ready to use kits, individual reagents and technical support to run the Ames mutagenicity assay in your own lab.

Ames mutagenicity assays are important for:

- the safety evaluation of cosmetics and pharmaceuticals
- the exclusion of genotoxic activity in chemicals or pesticides
- the exclusion of mutagenicity in medical devices
- the exclusion of micro-pollutants in drinking water
- the control of absence of genotoxic compounds in surface or waste water, air, soil or sediments
- the research in the field of food ingredients, food packaging

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**Procedure Ames Microplate Assay**

<table>
<thead>
<tr>
<th>Bacterial stock</th>
<th>Overnight culture</th>
<th>Assay preparation</th>
<th>Exposure cultures</th>
</tr>
</thead>
<tbody>
<tr>
<td>-80°C</td>
<td>OD₆₀₀</td>
<td>37°C, 12-15 h, 250 rpm</td>
<td></td>
</tr>
<tr>
<td>-37°C, 12-15 h, 250 rpm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Test sample dilutions, controls
- Exposure medium, Bacterial culture +/- S9 mix

384-well plates

Replicates 1 replicate 2 replicate 3

37°C, 90 min, 250 rpm (20 min E. coli + S9)

**Publications on Ames MPF (more publications available on demand)**


Benefits of Ames MPF and Ames II

- Complete ready to use kits with strains, ampicilline, culture media, positive controls and S9
- Same test principle and same tester strains as agar plate test
- Miniaturized, liquid microplate format allowing simultaneous processing of several compounds and automation
- Detection of genotoxic activity in chemicals, medical devices, cosmetics, pharmaceuticals, food ingredients, water, air, soil or sediments
- Certificate of analysis provided: Quality controlled reagents, biologicals and strains (genotyped and phenotyped)
- High concordance with agar plate-based assay (see literature)

Ames MPF versus agar plate test: 1 compound, 5 strains, +/- S9, triplicates, neg. / pos. control
- Up to 4-fold less compound consumption: 55 mg versus 220 mg
- 5 times less operator intervention: 1.5 h versus 5 h hands-on-time
- At least 3-fold less contaminated waste: 30 plates versus 240 plates
- In line with 3R: Up to 11-fold less consumption of rat liver S9 and thus 11 fold less test animals: 0.45 ml versus 5.25 ml of rat liver S9
- In line with OECD 471, FDA and ICH M7
- Fast, easy and no error prone counting of revertants

Ames MPF ready-to-use kits

<table>
<thead>
<tr>
<th>Article number</th>
<th>Product description</th>
<th>Kit configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>A10-210</td>
<td>Ames MPF 98/100 (2 x 480 Measuring Points)</td>
<td>10 samples</td>
</tr>
<tr>
<td>A10-210-S1-P, or S2-P</td>
<td>Ames MPF 98/100 (2 x 480 Measuring Points)</td>
<td>10 samples + S9 + pos. contr.</td>
</tr>
<tr>
<td>E10-213</td>
<td>Ames II (2 x 480 Measuring Points)</td>
<td>10 samples</td>
</tr>
<tr>
<td>E10-213-S1-P</td>
<td>Ames II (2 x 480 Measuring Points)</td>
<td>10 samples + S9 + pos. contr.</td>
</tr>
<tr>
<td>C10-512</td>
<td>Ames MPF PENTA I (5 x 480 Measuring Points)</td>
<td>10 samples</td>
</tr>
<tr>
<td>C10-512-S1-P, or S2-P</td>
<td>Ames MPF PENTA I (5 x 480 Measuring Points)</td>
<td>10 samples + S9 + pos. contr.</td>
</tr>
<tr>
<td>In prep.</td>
<td>Ames MPF PENTA II (5 x 480 Measuring Points)</td>
<td>10 samples</td>
</tr>
<tr>
<td>In prep.</td>
<td>Ames MPF PENTA II (5 x 480 Measuring Points)</td>
<td>10 samples + S9 + pos. contr.</td>
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</table>

Individual reagents

<table>
<thead>
<tr>
<th>Article number</th>
<th>Product description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSS-0110</td>
<td>AG-TA98 - semisolid</td>
<td>250 ul</td>
</tr>
<tr>
<td>PSS-0111</td>
<td>AG-TA100 - semisolid</td>
<td>250 ul</td>
</tr>
<tr>
<td>PSS-0112</td>
<td>AG-TA1535 - semisolid</td>
<td>250 ul</td>
</tr>
<tr>
<td>PSS-0113</td>
<td>AG-TA1537 - semisolid</td>
<td>250 ul</td>
</tr>
<tr>
<td>PLI-0110</td>
<td>AG-TA98 - liquid</td>
<td>250 ul</td>
</tr>
<tr>
<td>PLI-0114</td>
<td>TAMix liquid (TA7001–TA7006)</td>
<td>50 ul</td>
</tr>
<tr>
<td>PSS-0115</td>
<td>E.coli WP2 uvrA - semisolid</td>
<td>250 ul</td>
</tr>
<tr>
<td>PSS-0116</td>
<td>E.coli WP2 (pKM101) - semisolid</td>
<td>250 ul</td>
</tr>
<tr>
<td>PSS-0119</td>
<td>E.coli WP2 UnA(pKM101) - semisolid</td>
<td>250 ul</td>
</tr>
</tbody>
</table>

Strains

- **PSS-0110**: AG-TA98 - semisolid
- **PSS-0111**: AG-TA100 - semisolid
- **PSS-0112**: AG-TA1535 - semisolid
- **PSS-0113**: AG-TA1537 - semisolid
- **PLI-0110**: AG-TA98 - liquid
- **PLI-0114**: TAMix liquid (TA7001–TA7006)
- **PSS-0115**: E.coli WP2 uvrA - semisolid
- **PSS-0116**: E.coli WP2 (pKM101) - semisolid
- **PSS-0119**: E.coli WP2 UnA(pKM101) - semisolid

Liquid Media

- **PMM-GM00**: Ames MPF / Ames II growth medium (RT) | 50 ml |
- **PMM-EM02**: Ames MPF / Ames II exposure medium (RT) | 50 ml |
- **PMM-IM10**: Ames MPF / Ames II indicator medium (RT) | 550 ml |
- **PME-EM22**: Ames MPF E.coli exposure medium (RT) | 50 ml |
- **PME-IM31**: Ames MPF E.coli indicator medium (RT) | 550 ml |

Microsomal fractions of rat liver S9, co-factors

- **PRS-AC00**: Lyophilized, Aroclor 1254-induced rat liver S9 | 0.4 ml |
- **PRS-AC01**: Lyophilized, Aroclor 1254-induced rat liver S9 | 1 ml |
- **PRS-AC02**: Lyophilized, Aroclor 1254-induced rat liver S9 | 2 ml |
- **PRS-PB00**: Lyophilized, PB/BN-induced rat liver S9 | 0.4 ml |
- **PRS-PB01**: Lyophilized, PB/BN-induced rat liver S9 | 1 ml |
- **PRS-PB02**: Lyophilized, PB/BN-induced rat liver S9 | 2 ml |
- **PCO-0800**: S9 cofactor kit (Buffer Salts, G6P, NADP) | 20 ml |

Positive Controls

- **PPC-NF00**: 2-NF: 2-Nitrofluorene | 20 μg |
- **PPC-AA01**: 2-AA: 2-Aminoanthracene | 100 μg |
- **PPC-AA02**: 2-AA: 2-Aminoanthracene | 2 mg |
- **PPC-NQ02**: 4-NQO: 4-Nitroquinoline-N-oxide | 50 μg |
- **PPC-AC02**: N4-ACT: N4-Aminocytidine | 2.5 mg |
- **PPC-AR05**: 9-AAC: 9-Aminoaacidine | 1000 μ |
- **PPC-AF10**: 2-AF: 2-Aminofluorene | 10 mg |

Ampicillin

- **PAM-0001**: Ampicillin | 50 μl |

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S1 = Aroclor 1254-induced rat liver microsomal fraction S9
S2 = Phenobarbital/β-Naphtoflavone (PB/BN)-induced rat liver microsomal fraction S9