

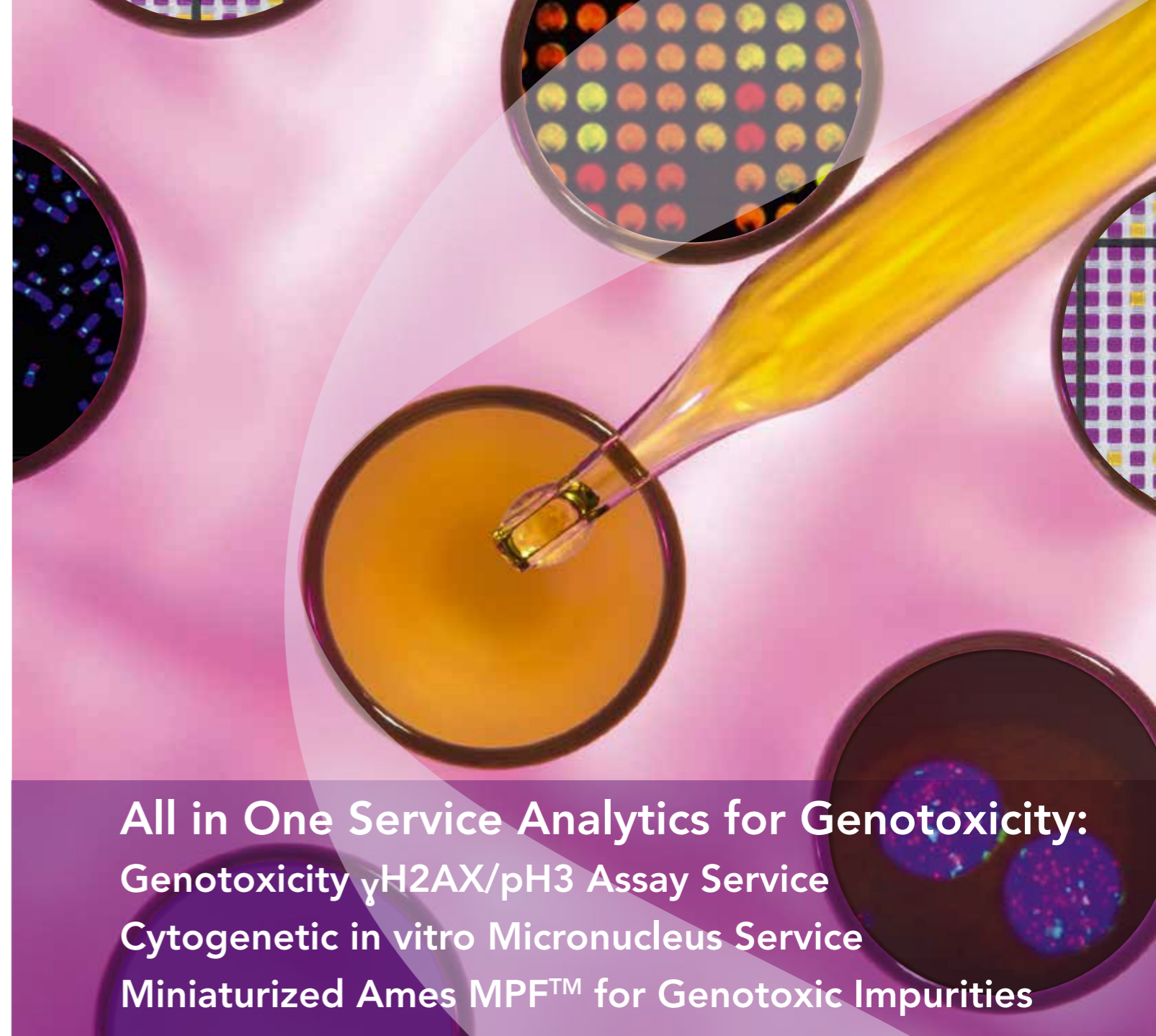
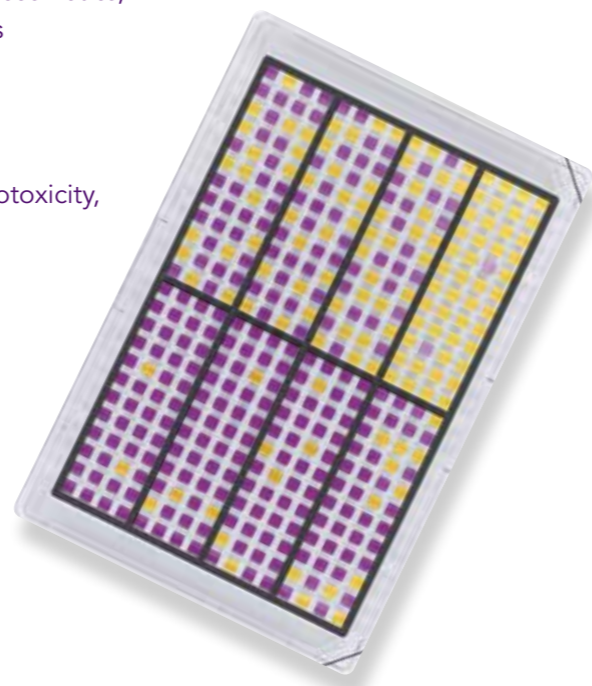


Service analytics with miniaturized Ames MPF™

- High concordance with agar plate-based assay, same test principle and same tester strains as agar plate test
- Up to 4-fold less compound consumption: 55 mg versus 220 mg (agar plate test)
- Fully in line with ICH M7 or with ISO 11350:2012
- 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
- Detection of genotoxic activity in chemicals, medical devices, cosmetics, pharmaceuticals, food ingredients, water, air, soil or sediments

Others analysis services available:

- In vitro toxicology: skin and eye irritation, skin corrosion, phototoxicity, In vitro skin sensitization, ex vivo skin permeation.
- Physico-chemical Properties
 - – OECD/EU-Methods
 - – UN-Methods
 - – CIPAC-Methods
- Ecotoxicology
- Biodegradation
- Environmental Fate
- Analytical Chemistry
- Endocrine Properties



All in One Service Analytics for Genotoxicity:

- Genotoxicity γ H2AX/pH3 Assay Service
- Cytogenetic in vitro Micronucleus Service
- Miniaturized Ames MPF™ for Genotoxic Impurities

- γ H2AX/pH3 assay identifies compounds with different mode of genotoxic action: aneugenic, direct or bioactivated clastogenic compounds
- In vitro micronucleus (OECD 487) on TK6 cells or on human blood
- Chromosome aberration test (OECD 473) on human blood
- Mouse lymphoma assay (OECD 490) on L5178Y(TK locus) cell line
- Telomere – centromere analysis
- Miniaturized Ames MPF™ Penta 1 or Penta 2 assay on 5 regulatory strains
- Miniaturized Ames MPF™ 98/100 for genotoxic impurities (ICH M7)
- Ames MPF 98/100 Aqua for surface or waste water (ISO 11350:2012)

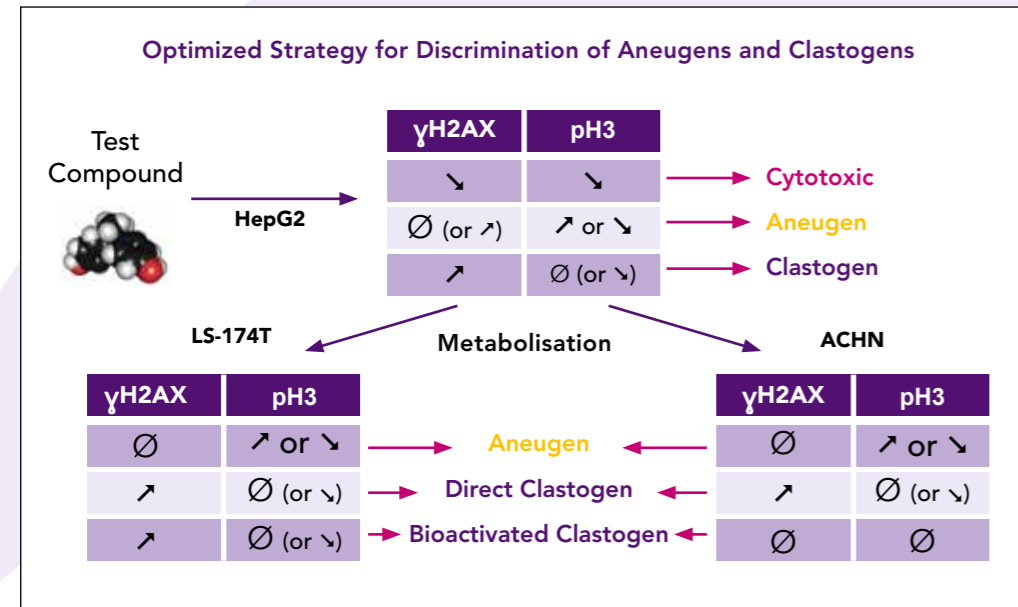
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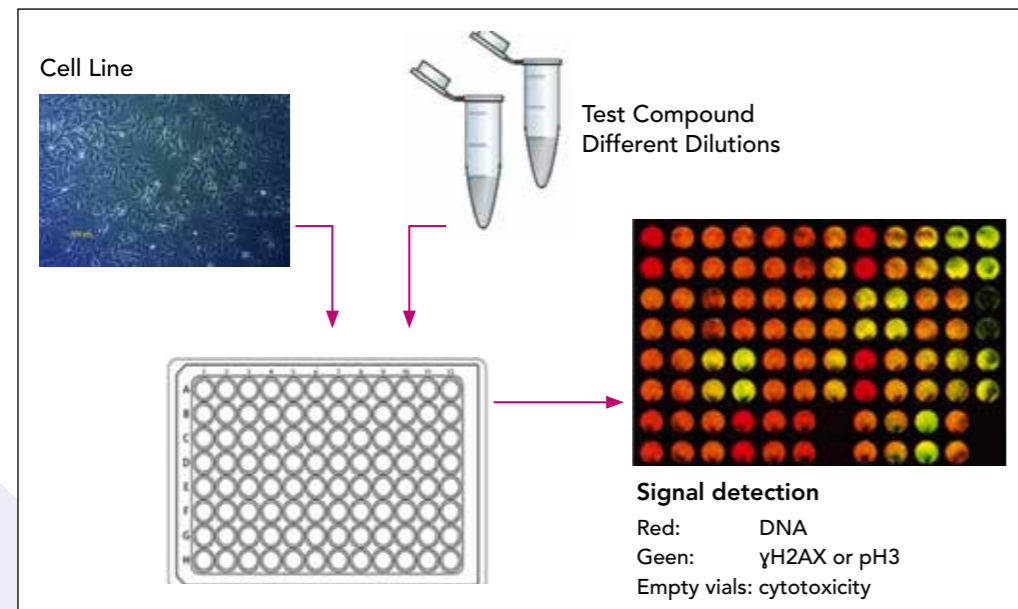
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Genotoxicity γ H2AX/pH3 Assay – for multiple tissues and cell cultures



γ H2AX Assay for many different metabolizing or non-metabolizing cells, organ specific tissues, biopsies.



- Classification of aneugens and direct or bioactivated clastogens in one single test
- Assay for large range of human cell lines, adherent (HepaRG, HaCat, etc.) or in suspension (TK6), metabolizing or non metabolizing
- Assay for large range of human and animal tissues, biopsies
- Short turnaround time 14 days
- Higher sensitivity and specificity as compared to Micronucleus Assay
- No false positive results with ECVAM compounds
- Monodose or repeated treatments
- Samples: chemicals – fluorescent or coloured, pharmaceuticals, cosmetics, alimentary, agrochemical, environmental, water

References

Khoury et al. (2013) Env. Mol. Mut.
 Khoury et al.(2016) Mutagenesis
 Khoury et al.(2016) Arch. Tox.

Telomere – Centromere Analysis – results from highly skilled scientist

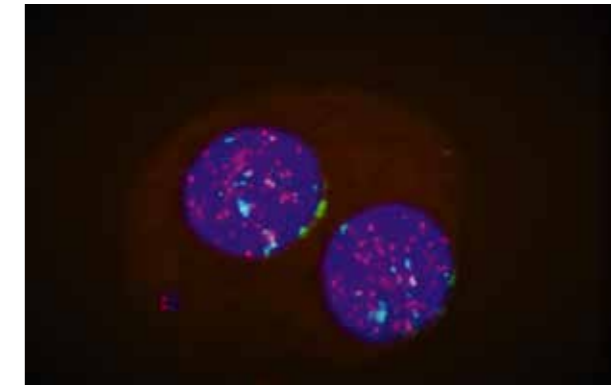
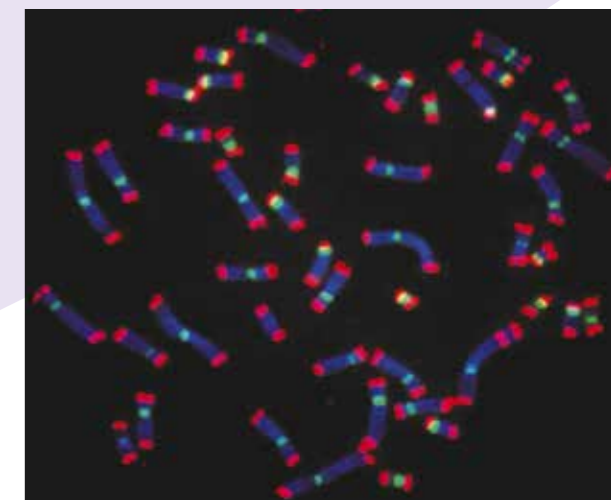
- Preclinical and clinical safety evaluation
- Combination of telomere-centromere measurement with chromosome aberration test (OECD 473).
- Identification of micronucleus components when combined to in vitro micronucleus assay (OECD 487)
- Evaluation of potential genotoxic impurities/intermediates, metabolites and batch qualification (ICH M7)
- In vitro test on cell line (TK6) or on human blood cells
- Qualitative and quantitative approach, GLP or non GLP
- Chemicals or pharmaceuticals and cosmetics, environmental samples

Cytogenetics – high content image analysis

- In vitro micronucleus (OECD 487) in TK6 cells or in human blood cells
- DAPI staining, telomere and centromere staining
- Image analysis by Metafer technology

Chromosome aberration test – result interpretation made easy

- Chromosome aberration test (OECD 473) in human blood cells
- DAPI staining or mFISH, telomere and centromere staining
- Image analysis by Metafer technology



«Telomere and Centromere Staining»

