



# TEMPO<sup>®</sup>

CHALLENGE TEST AUTOMATION  
Built for enumeration - Designed for innovation



PIONEERING DIAGNOSTICS

# TEMPO<sup>®</sup> Because my lab counts



## TIME SAVINGS BENEFITS

- Free Up time for investigation studies and quickly adapt to seasonal workload peaks
  - 50% of labor savings in average
  - 100 enumerations/hour
- Decrease new formulation development time and manage more projects concurrently
  - Three-day reduction in incubation time yields

## STANDARDIZATION

- Neutralization efficiency demonstration:
  - 1 to 4900 CFU/g or ml
- Enumerate: from 100 CFU/g up to 10E8 CFU/g
- Easy to Use
- Fast technical training
- Less waste
- Simplified reagent management (long shelf lives and space savings)

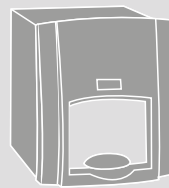
## QUALITY

- Technical Reliability
  - USP <1223> and ISO 11930 compliant
- Data integrity
  - Enumeration Traceability
  - 21 CFR part 11 compliant software
  - Connectivity to LIMS and results exportable to Excel

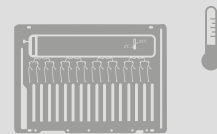
## WORKFLOW SIMPLIFICATION



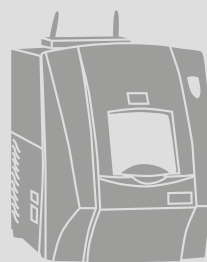
Ready-to-use sample neutralization



Card filling



Incubation



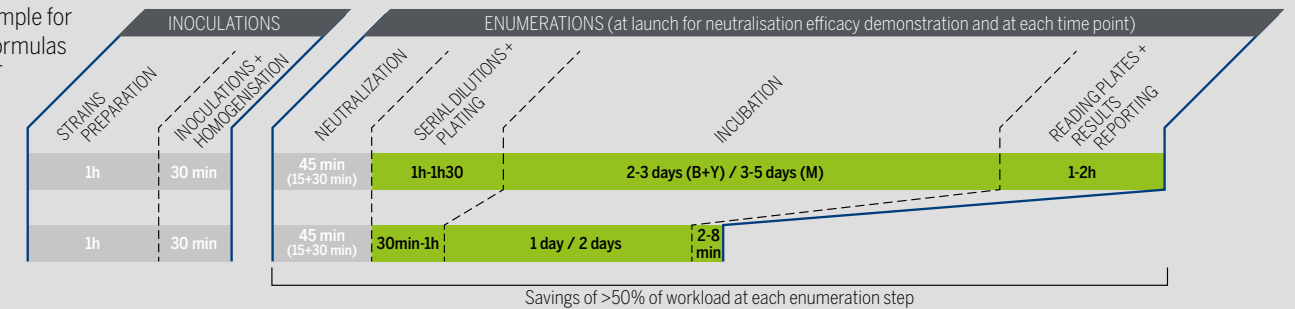
Enumeration results

## TEMPO<sup>®</sup>, A MINIATURIZED AND OPTIMIZED MPN METHOD (16 TUBE REPETITION)

A unique enumeration card (3,7 log reading range per card) and single vial of specific culture medium replaces numerous dilution tubes and plates.

## NO SERIAL DILUTIONS & NO PLATING

Timing example for a batch 5 formulas with ISO CT



## COMPATIBLE WITH ALL COSMETIC CATEGORIES

More than 150 products tested

Category	Exemples
Toiletries	Shower gels, shampoos, soaps, antiseptic liquid soaps, deodorants, shaving ...
Skin care	Face masks, massage oils, anti-aging creams, self tanning, anti-redness, whitening cream, sunscreens, make up removal lotions...
Make-up	Foundations, eye shadows, lip gloss, mascara, glittering gel...

Category	Exemples
Hair styling	Conditioners, Moisturizers, straighteners...
Baby's products	Titanium cream, cleansing products, skin lotion
Oral care	Toothpastes (regular, whitening, fresh...)
Depilatories	Creams

## COMPLIANCE WITH INTERNATIONAL STANDARDS

USP <1223> validation of alternative microbiological method

Quantitative enumeration method validation

Validation Parameters	Result
Accuracy	✓
Precision	✓
Specificity	✓
Detection limit	✓
Quantification limit	✓
Linearity	✓
Operational range	✓
Robustness	✓
Repeatability	✓
Ruggedness	✓

ISO 11930 - evaluation of the antimicrobial protection of a cosmetic product

Equivalency of challenge tests results towards the reference method on 20 different formulas.

With *Staphylococcus aureus* (ATCC 6538 / NCTC 10788), *Pseudomonas aeruginosa* (ATCC 9027 / ATCC 27853 / NCTC 12924), *Escherichia coli* (ATCC 8739 / ATCC 25922 / NCTC 12923), *Candida albicans* (ATCC 10231/ NCPF 3179) and *Aspergillus brasiliensis* (NCPF 2275).

For any other complementary strains, a protocol is available. IQ/OQ/PQ validation package available .



# Challenge Test automation with TEMPO®

increases throughput and delivers results faster, which increases flexibility and shortens the product development cycle.



REFERENCE	PRODUCT DESIGNATION	NOTE
VC 4704566	TEMPO® Challenge Test System	TEMPO® instrument configuration
416683	TEMPO® Challenge Test Bacteria	CTB (48 enumeration tests for bacteria)
416684	TEMPO® Challenge Test Fungi	CTF (48 enumeration tests for fungi)
421112	Eugon LT100 supplemented broth (6 x 99 ml)	Ready to use neutralizing media
33900	Eugon LT100 supplemented broth (20 x 9 ml)	Ready to use neutralizing media in tubes
AEB110579NAF	Eugon LT100 supplemented broth (100 x 9 ml)	Ready to use neutralizing media in tubes
AEB111499	Tryptone salt (100 x 9 ml)	Tubes for neutralisation efficiency demonstration