

## EVOSEP ONE – UNIQUE SYSTEM PROPERTIES

The Evosep One from Evosep is unique in its features and customer benefits. Most notable features and benefits include:

- Use of disposable trap columns:
  - Reduces carry-over in e.g. complex HeLa digests to < 0.05% of TIC.
  - Reduces cycle time.
- Partial elution from trap columns.
  - Leaves impurities on the disposable traps, thereby greatly increasing column life.
- Gradient offset focusing (where the organic %B-gradient is lowered concurrently with the elution and pre-separation of peptides in a pre-formed gradient)
  - Allows shorter columns / improves resolving power on analytical column.
- Fast trap-elution and gradient formation at 30µl/min.
- Use of a long and narrow storage loop as hand-over between the low-pressure, high-flow gradient preparation and the high-pressure, low-flow gradient delivery.
- Four pumps (80%) of the system configuration is running at 30 bars or less
  - Reduces wear so recommended preventive maintenance cycle is following every 30,000 samples.
- Large sample capacity with room for six 96-tip racks.
- Optimized, fixed methods:
  - Up to 300 samples/day @ 1-2 µl/min flow rate
  - Up to 93% MS utilization rate



| Throughput (samples/day) | Cycle Time (minutes) | Gradient (minutes) | Overhead (minutes) | Flow rate (µl/min) | Column suggestions                   |
|--------------------------|----------------------|--------------------|--------------------|--------------------|--------------------------------------|
| 300                      | 4.8                  | 3                  | 1.8                | 2.0                | L: 2 cm, ID 150µm, 3µm C18 Reprosil  |
| 200                      | 7.2                  | 5                  | 2.2                | 1.5                | L: 5 cm, ID 150µm, 3µm C18 Reprosil  |
| 100                      | 14.4                 | 12                 | 2.4                | 1.2                | L: 8 cm, ID 100µm, 3µm C18 Reprosil  |
| 60                       | 24.0                 | 21                 | 3.0                | 1.0                | L: 12 cm, ID 100µm, 3µm C18 Reprosil |
| 30                       | 48.0                 | 45                 | 3.0                | 0.6                | L: 25 cm, ID 100µm, 3µm C18 Reprosil |