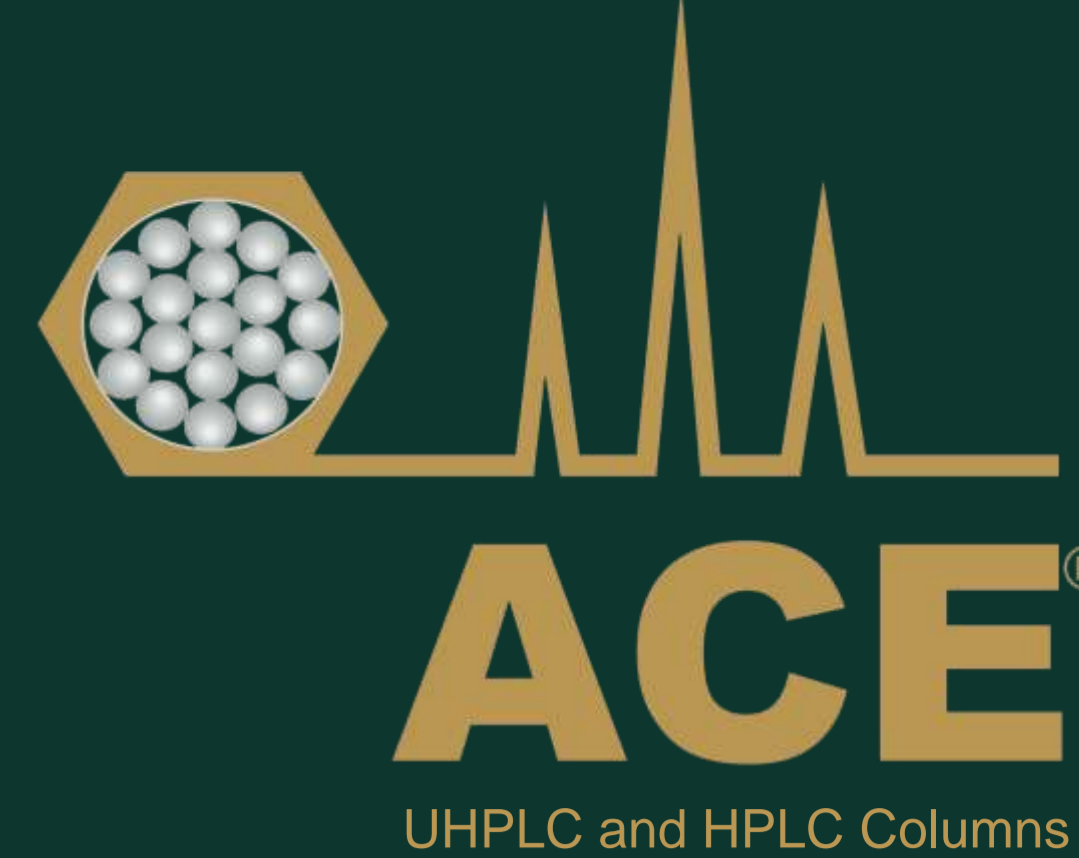


# A New, Extended pH Range Stable Solid Core UHPLC / HPLC Column Family With SuperC18 And SuperPhenylHexyl Bonded Phases



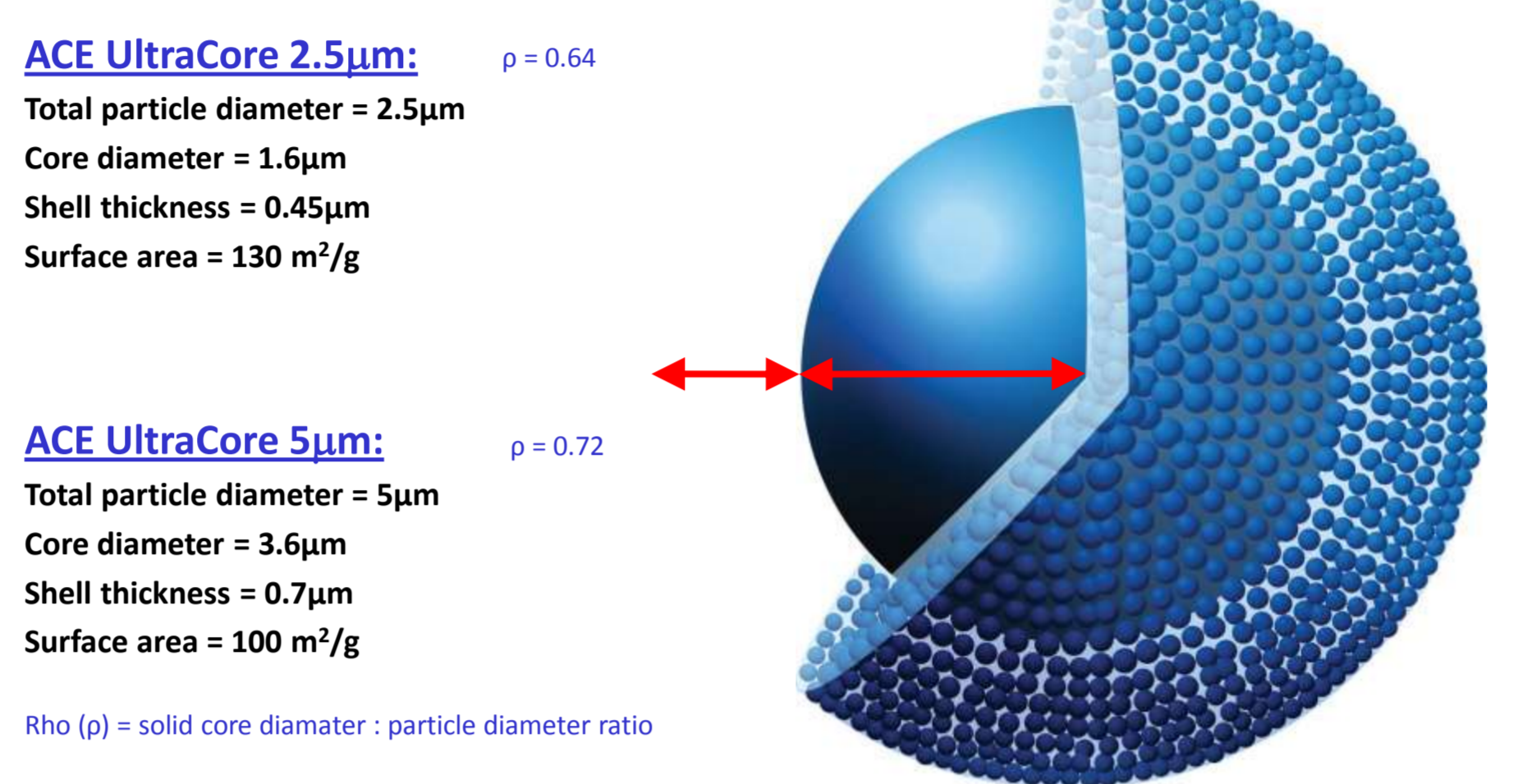
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## 1. INTRODUCTION

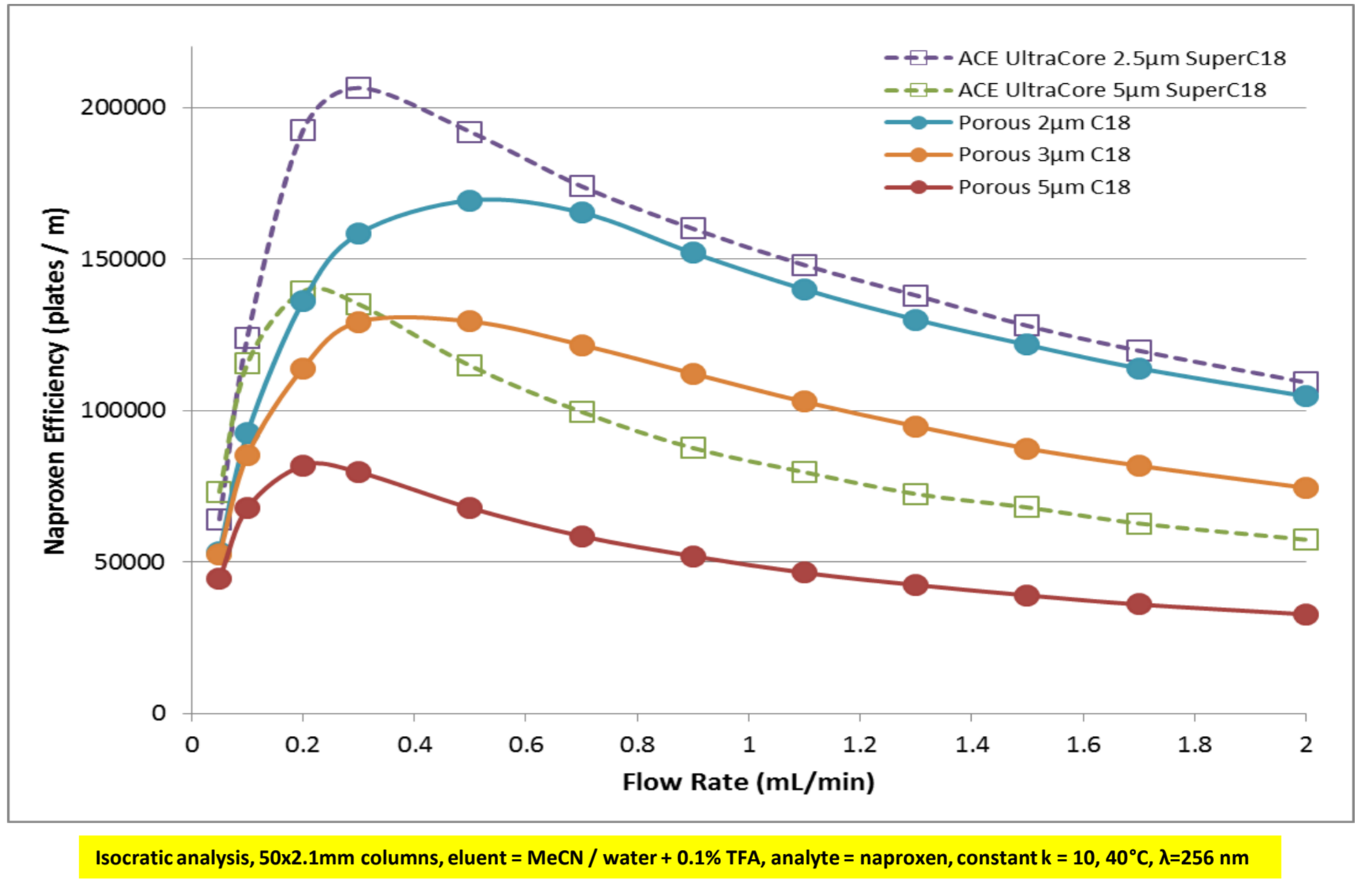
- Solid core particles have gained interest for UHPLC / HPLC due to rapid separations, method transferability and low back pressure.
- Many current solid core columns have a reduced usable eluent pH range.
- Using novel bonding technology, ACE<sup>®</sup> UltraCore<sup>™</sup> SuperPhenylHexyl and SuperC18 phases deliver superior inertness and superb peak shape for acids, bases and neutral analytes for UHPLC / HPLC.
- The advanced bonding technology provides reproducibility and stability between pH 1.5 to 11.0 for both phases allowing selectivity to be fully explored for method development & screening activities.
- This poster explores selectivity and separations with ACE<sup>®</sup> UltraCore<sup>™</sup>.

## 2. ACE<sup>®</sup> UltraCore<sup>™</sup>: SOLID CORE PARTICLE TECHNOLOGY

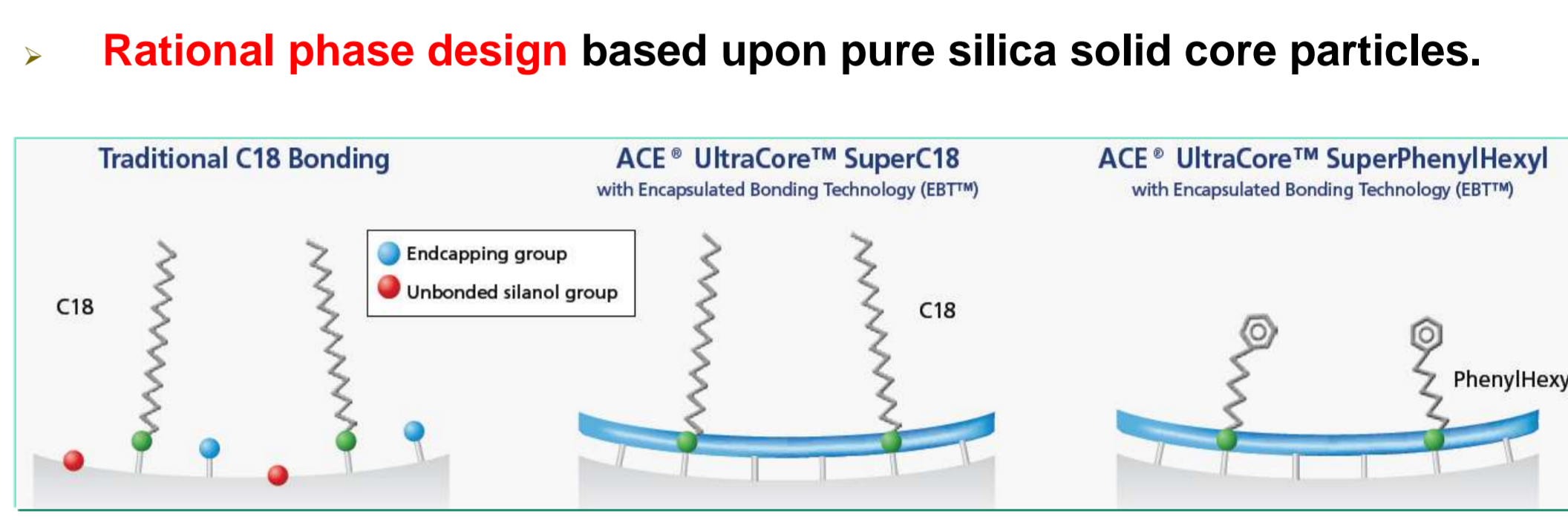


- ACE solid core particles are scalable for selectivity.
- ACE porous particles are fully scalable (2µm → 10µm).

## 3. EFFICIENCY COMPARISON: POROUS AND SOLID CORE

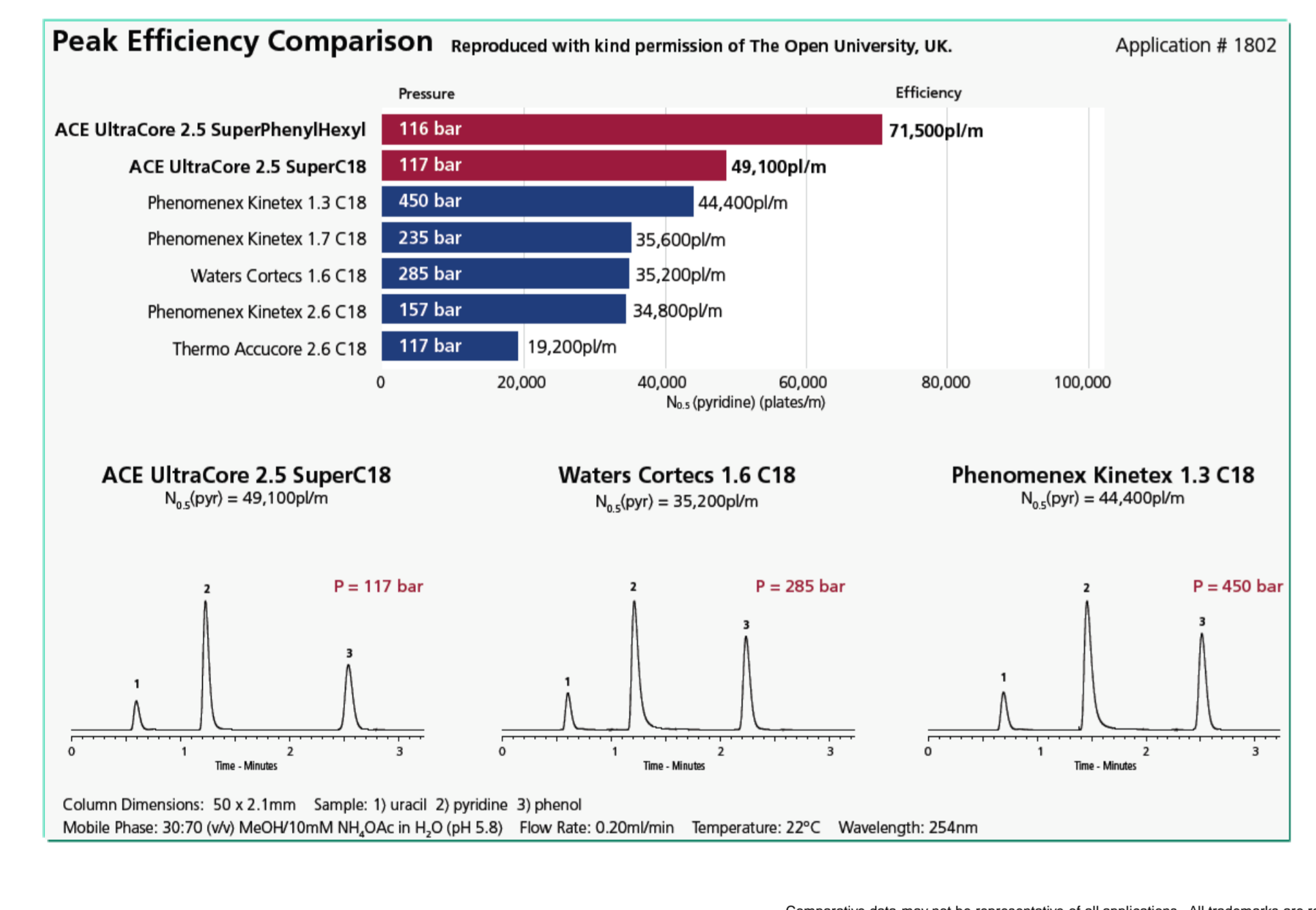


## 4. ENCAPSULATED BONDING TECHNOLOGY (EBT<sup>™</sup>)

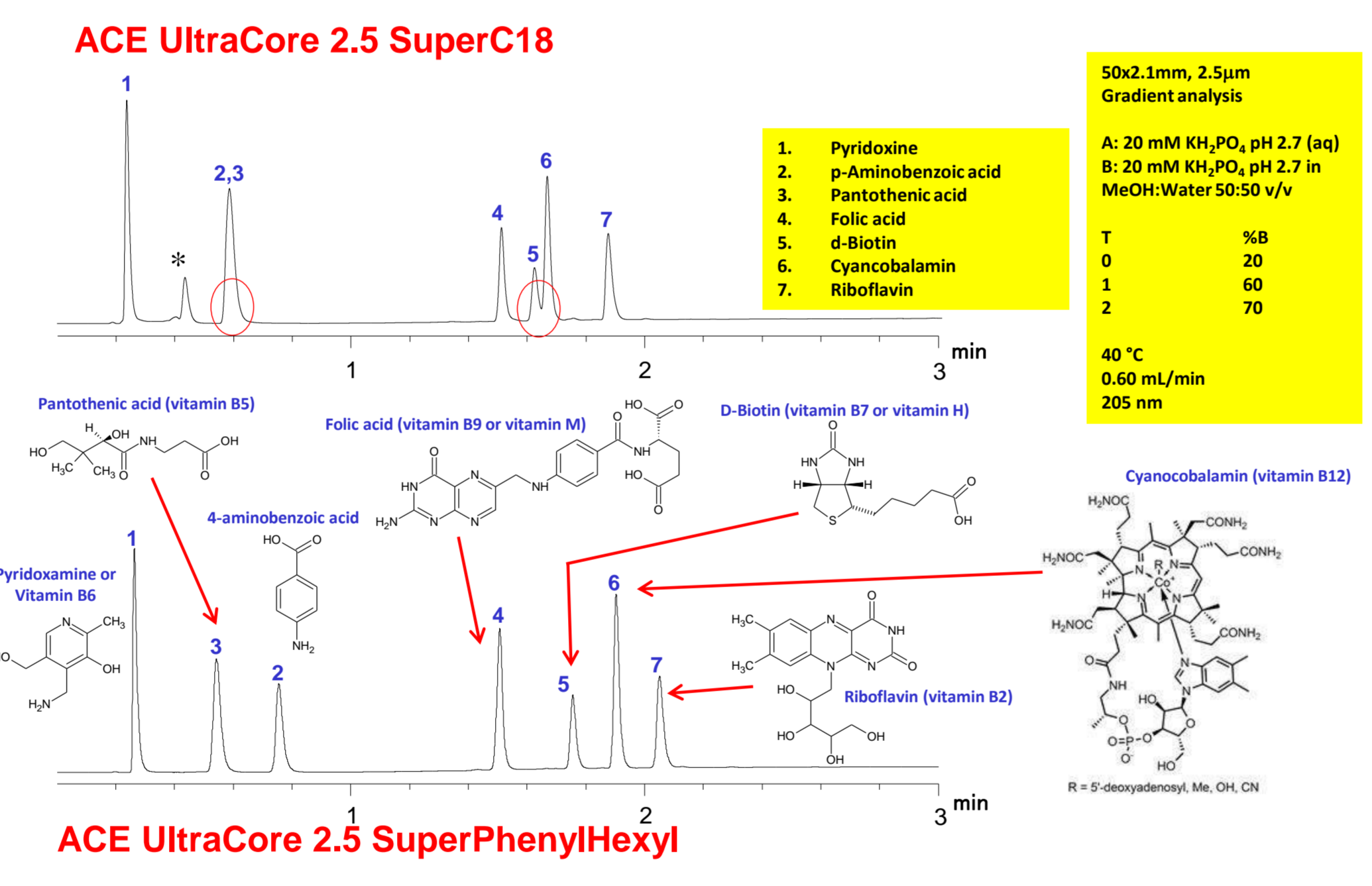


- The bonding dramatically reduces silanol activity leading to a highly inert silica solid core particle with subsequent excellent peak shapes for acidic, basic and neutral analytes.

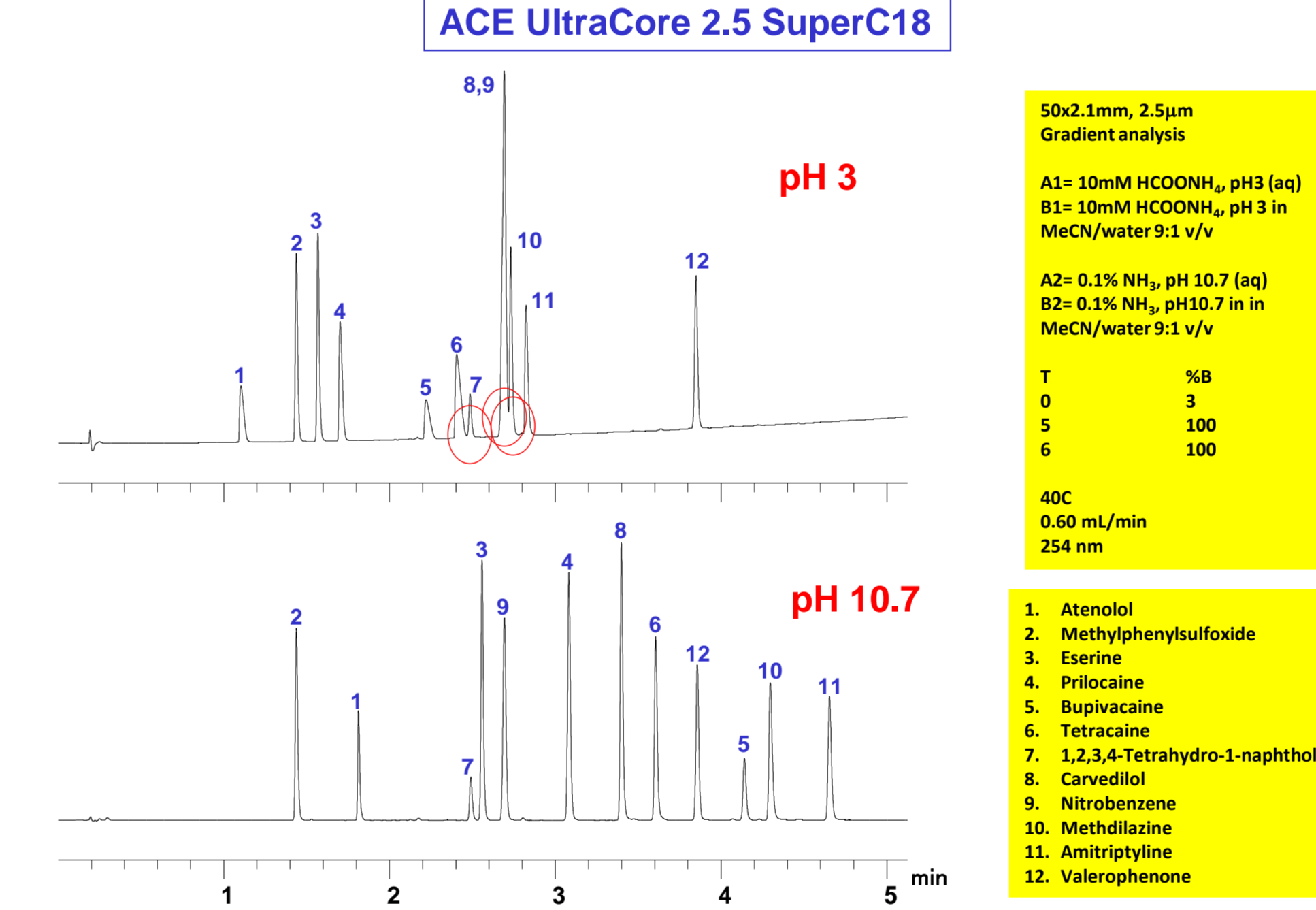
## 5. SOLID CORE INERTNESS DATA COMPARISONS



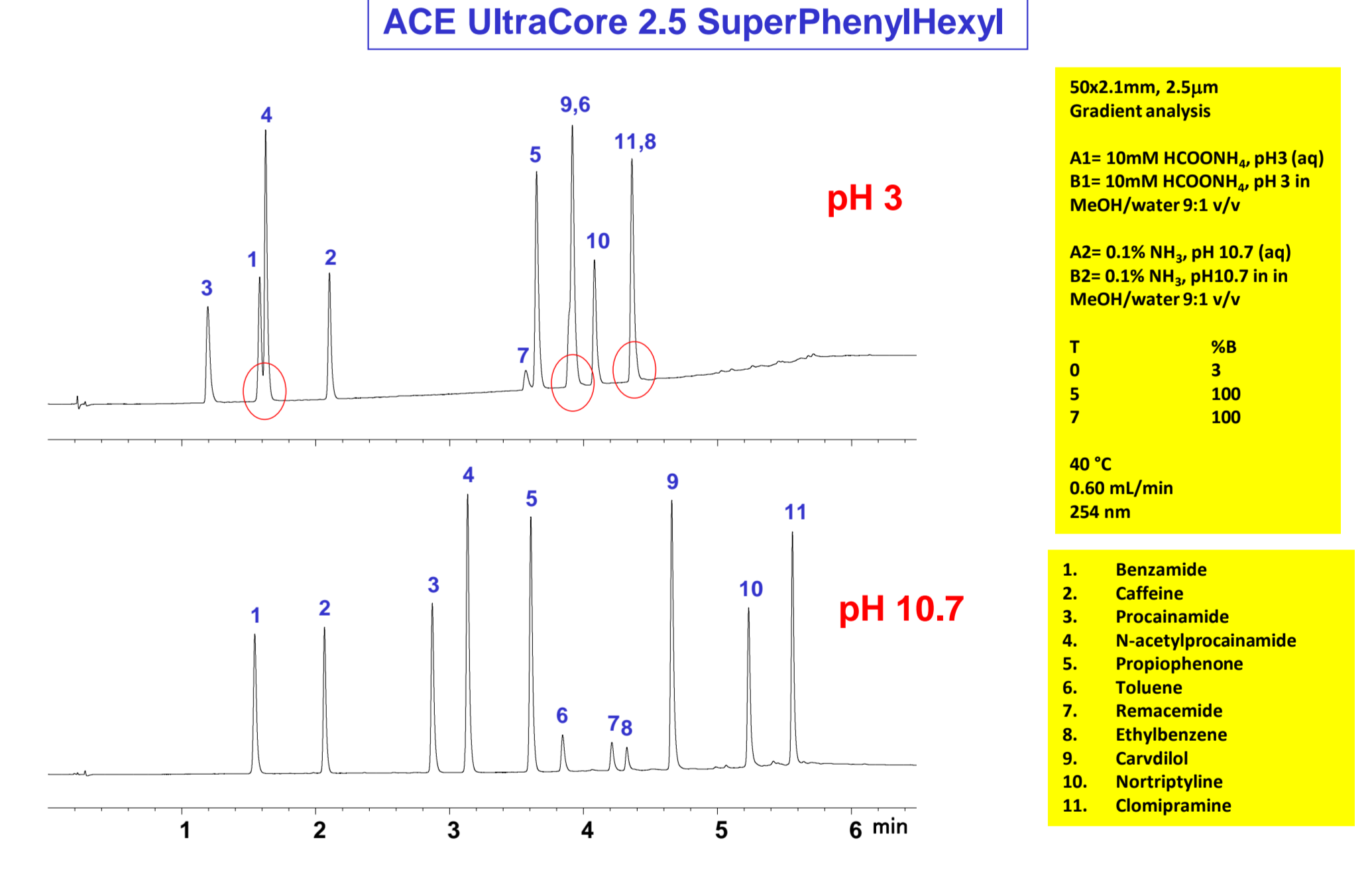
## 6. EXPLOIT PHASE SELECTIVITY FOR SEPARATIONS



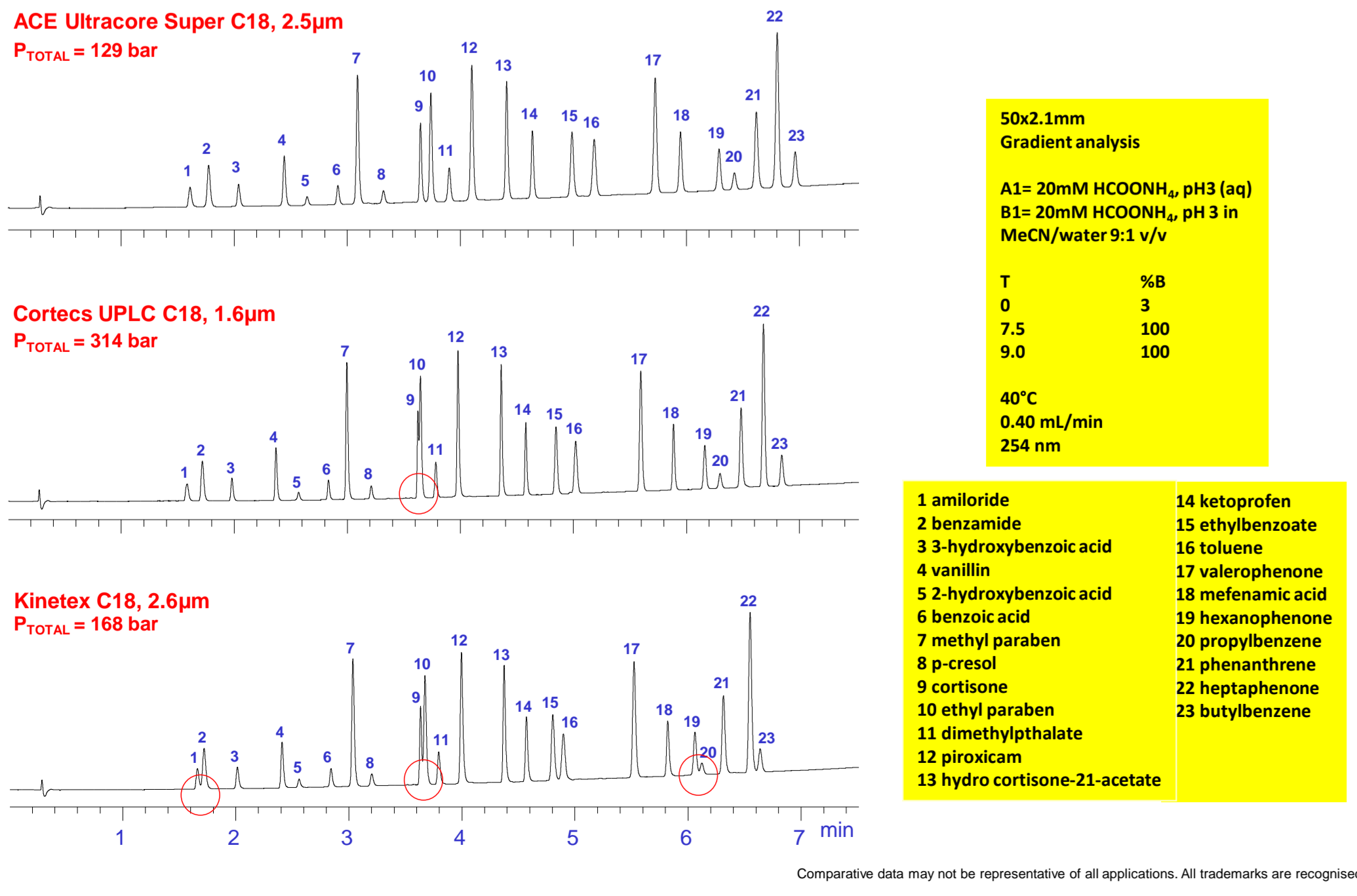
## 7. EXPLOIT SELECTIVITY WITH LOW & HIGH ELUENT PH



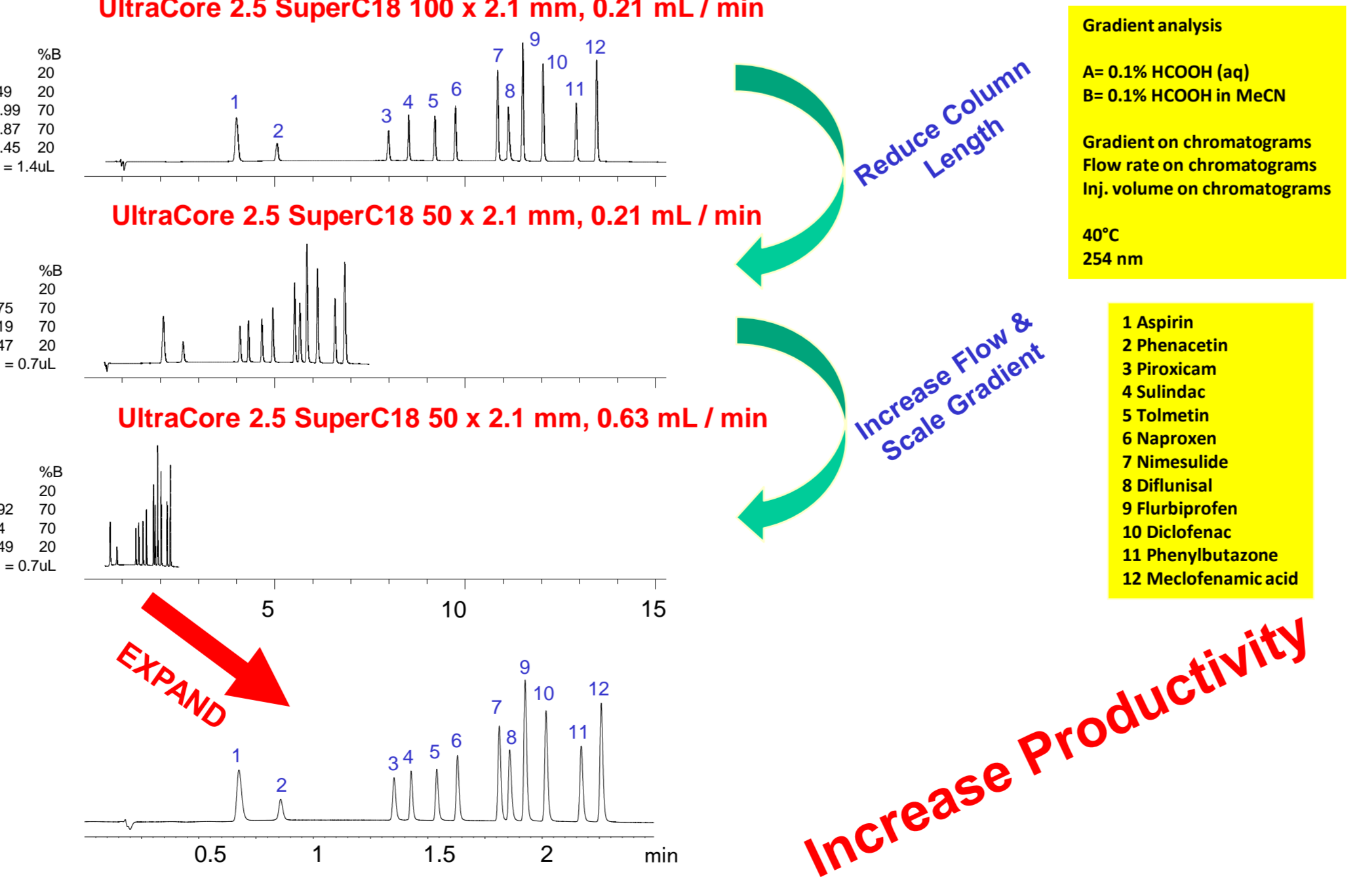
## 8. EXPLOIT SELECTIVITY WITH LOW & HIGH ELUENT PH



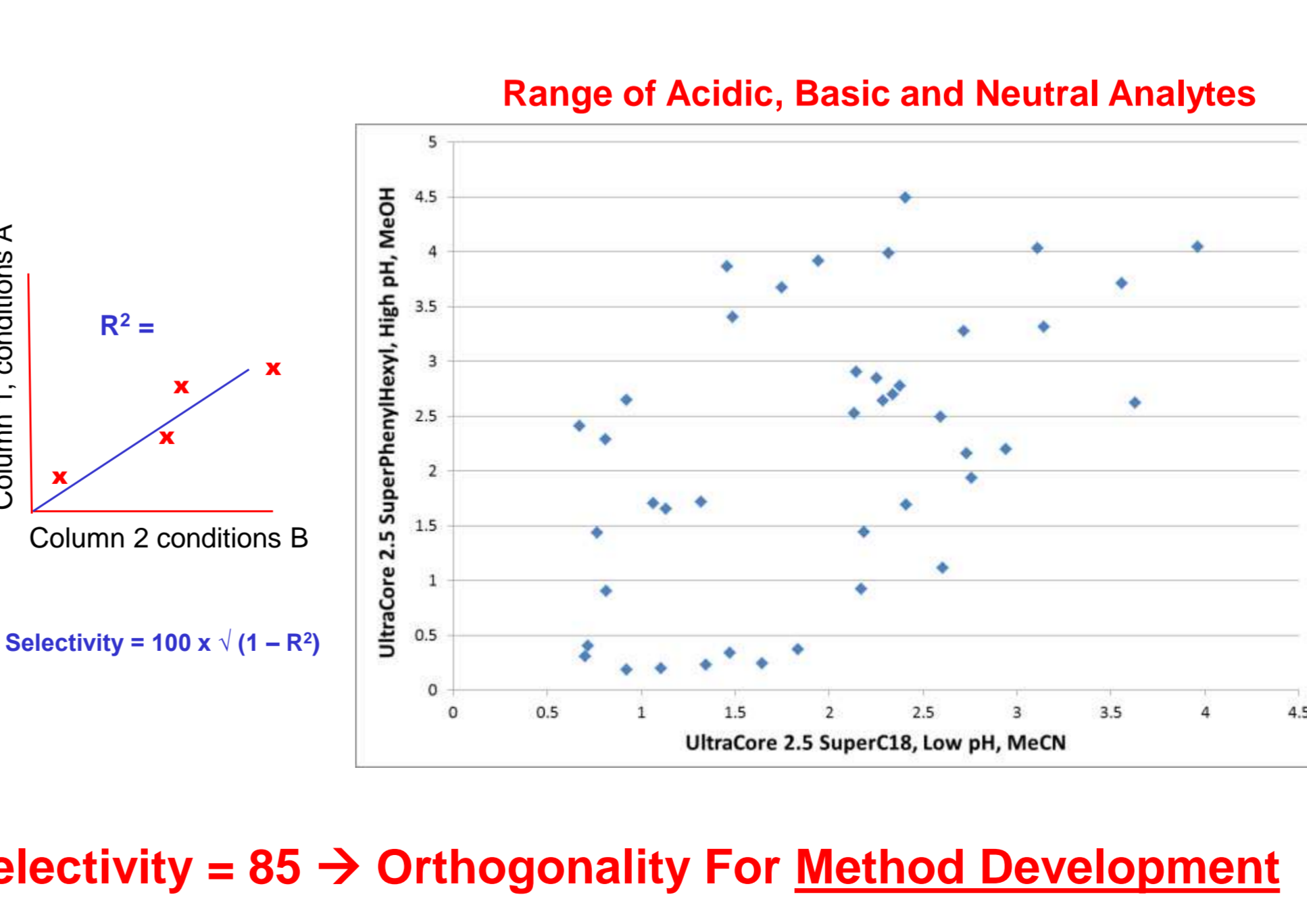
## 9. SOLID CORE COMPARISONS FOR COMPLEX MIXTURES



## 10. METHOD SCALING / RAPID ANALYSES / PRODUCTIVITY



## 11. ACE<sup>®</sup> UltraCore<sup>™</sup>: EXPLORE PHASE & PH SELECTIVITY



## 12. SUMMARY AND CONCLUSIONS

- ACE<sup>®</sup> UltraCore<sup>™</sup> and solid core particle technology are exciting developments for UHPLC / HPLC.
- ACE<sup>®</sup> UltraCore<sup>™</sup> SuperC18 and SuperPhenylHexyl columns provide highly inert phases that deliver excellent chromatographic performance for acidic, basic or neutral analytes across the pH range.
- The ability to exploit selectivity using stationary phase type with a broad eluent pH range (1.5 to 11.0) provides analysts with a powerful option for solid core column based method development.