

## **Distributions per spectrometer (phase 1 and 2)**

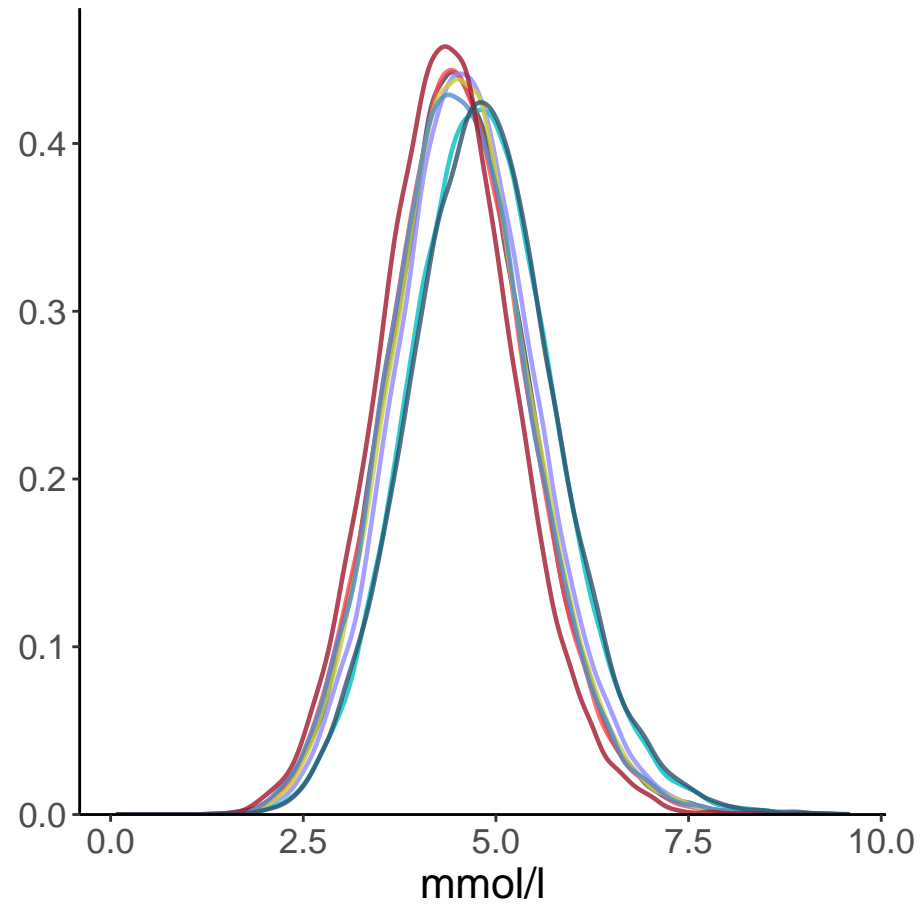
Outliers  $4 \times$  IQR from median removed

Nightingale Health Plc.

# Cholesterol

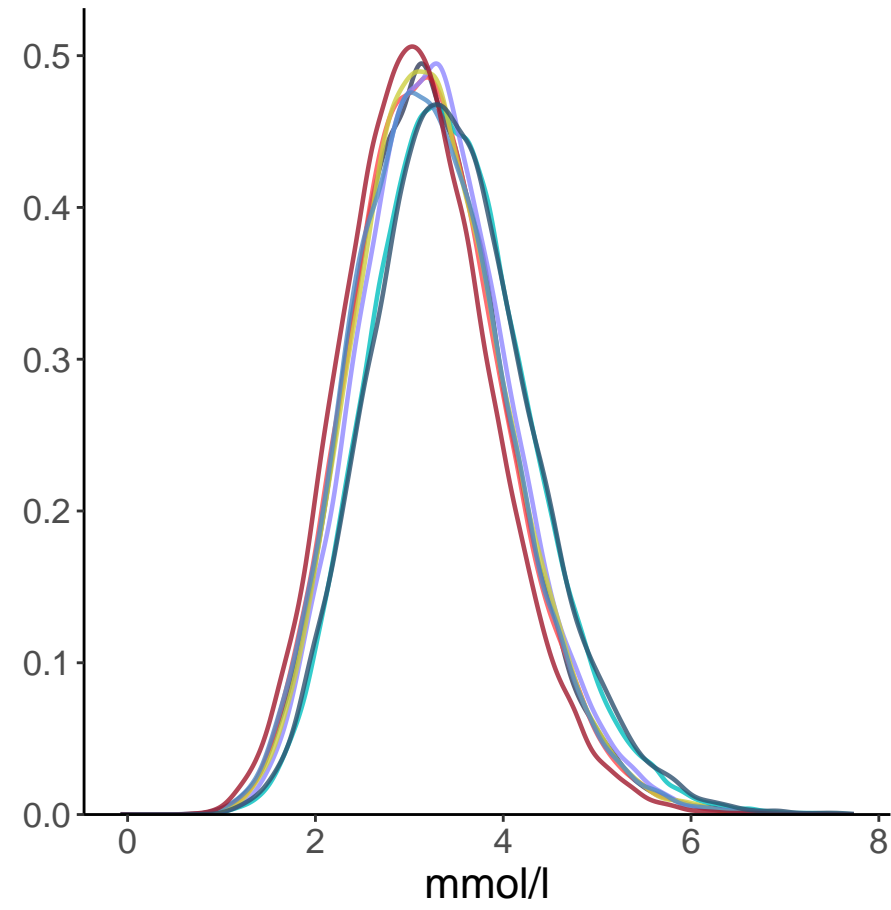
## Total\_C

Spectrometer



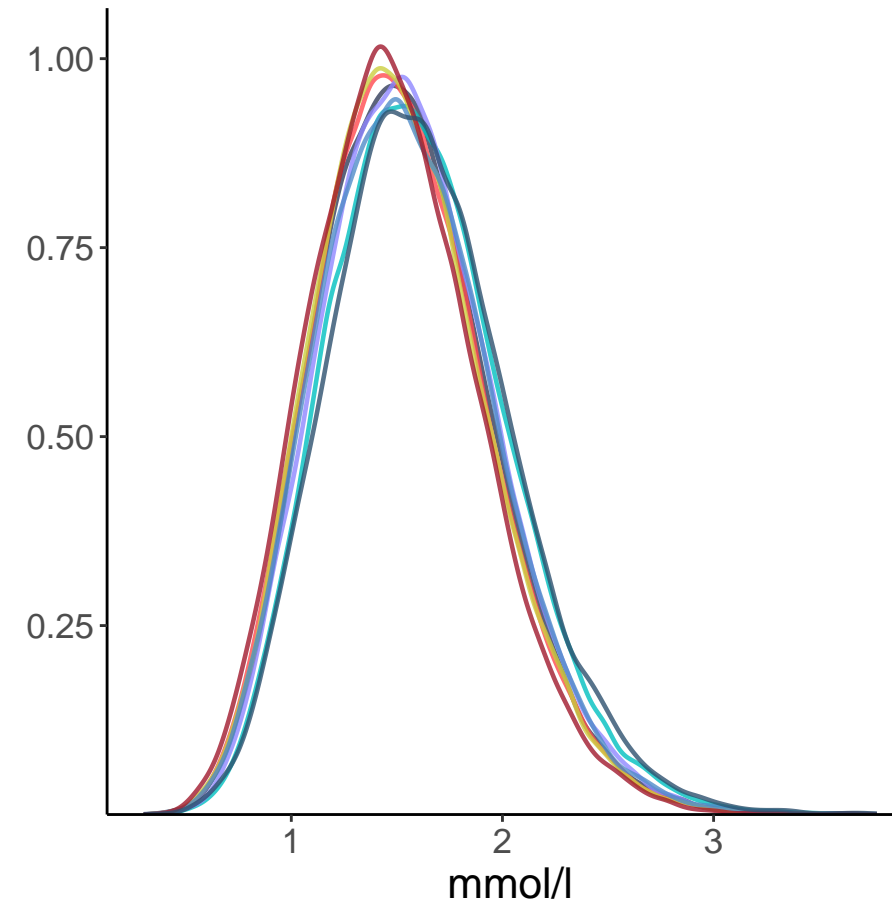
## non\_HDL\_C

Spectrometer



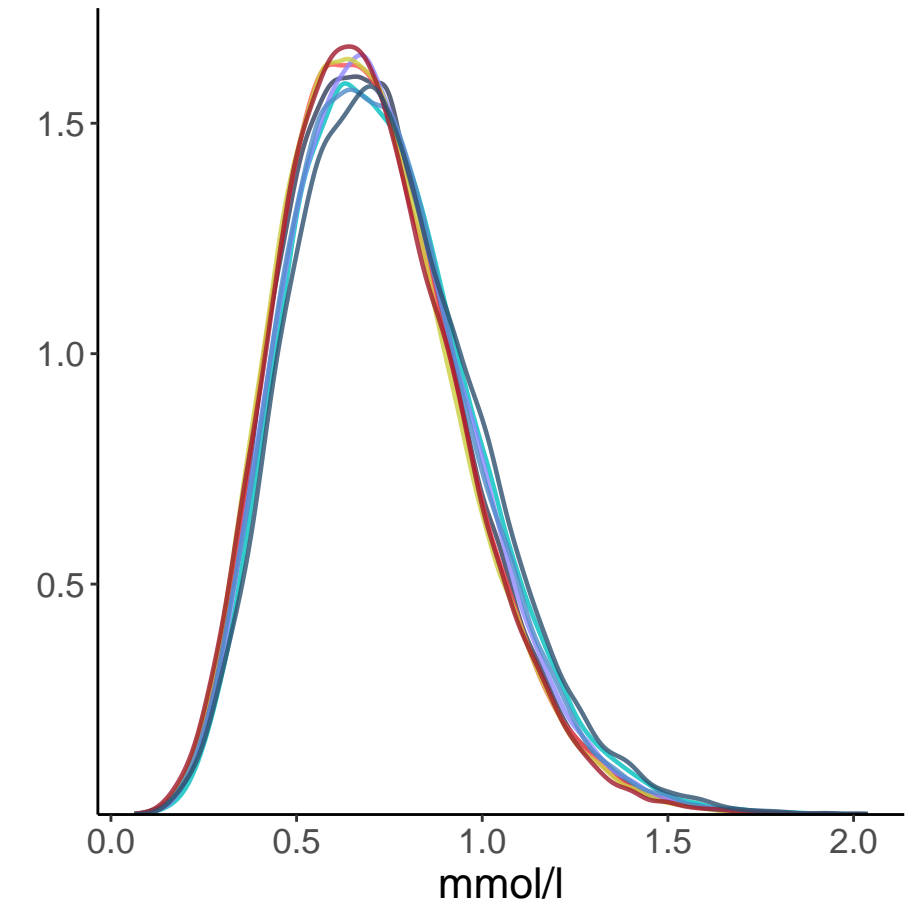
## Remnant\_C

Spectrometer



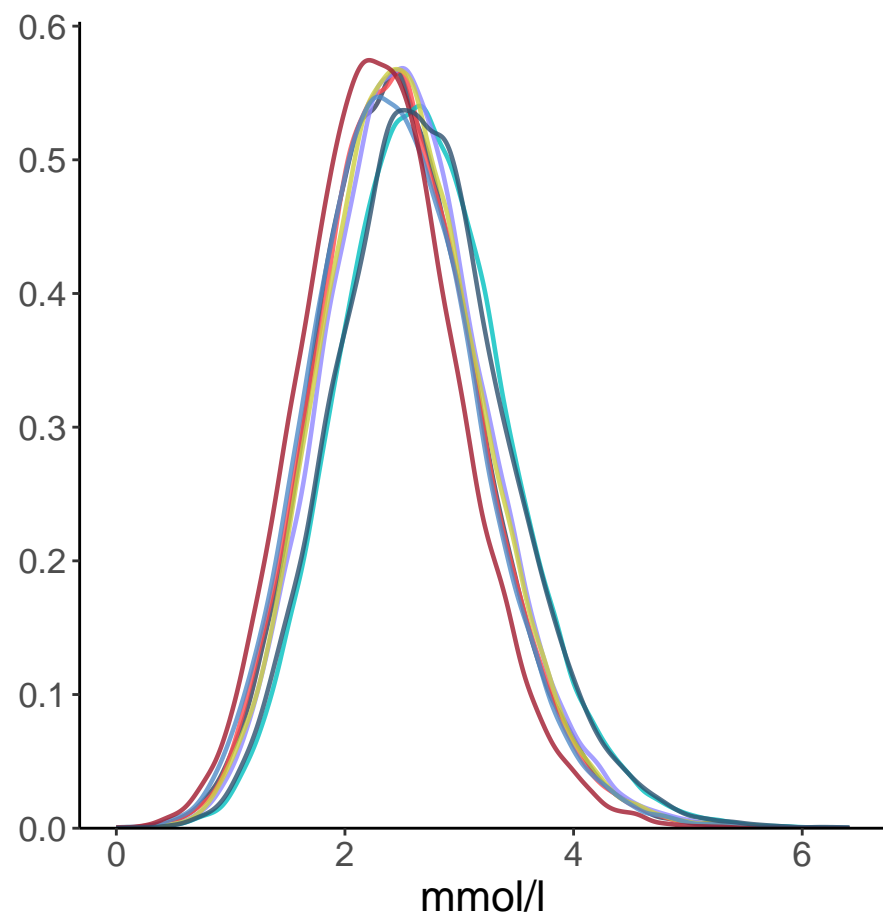
## VLDL\_C

Spectrometer



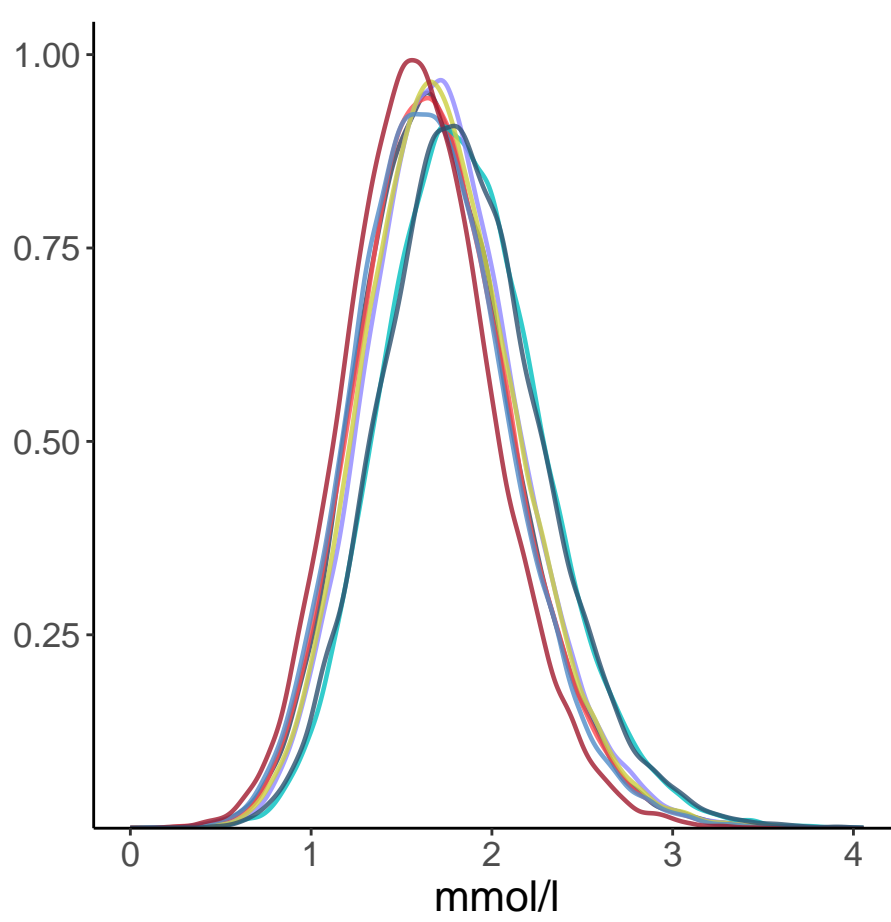
## Clinical\_LDL\_C

Spectrometer



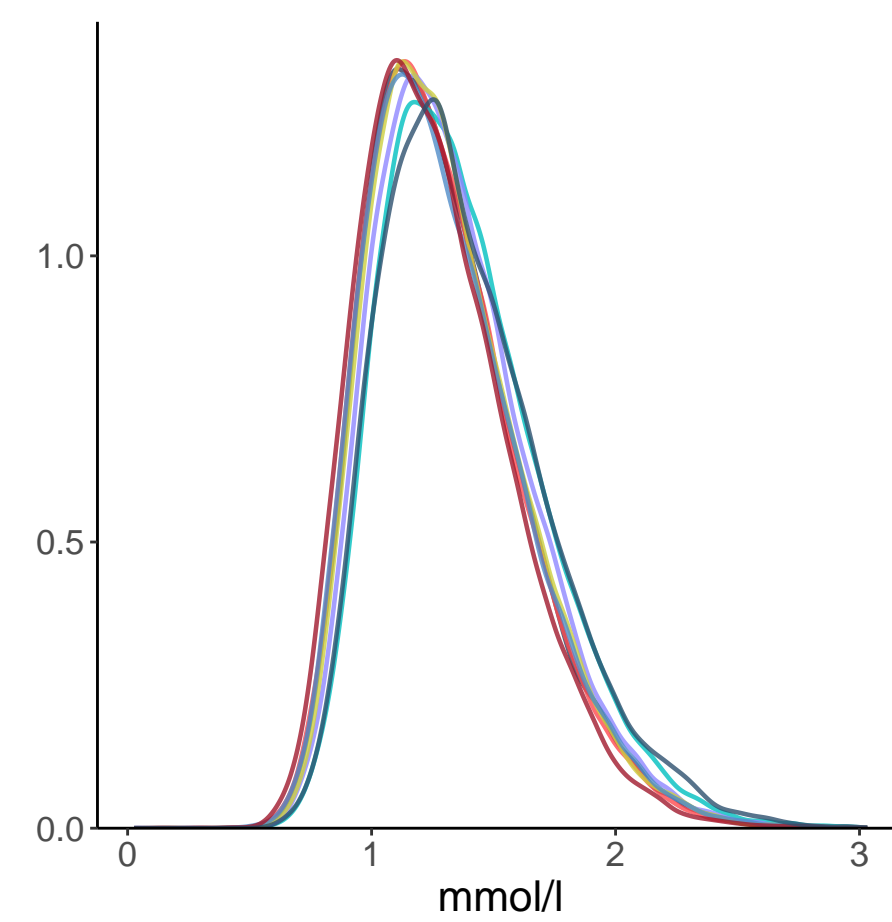
## LDL\_C

Spectrometer



## HDL\_C

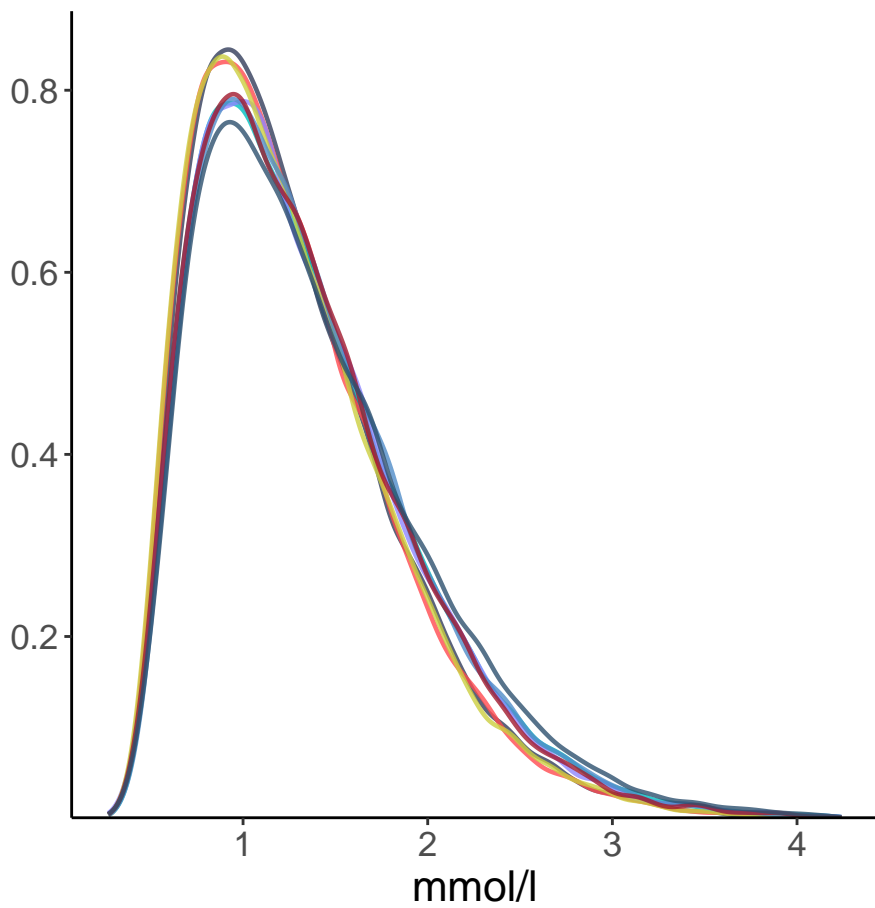
Spectrometer



# Triglycerides

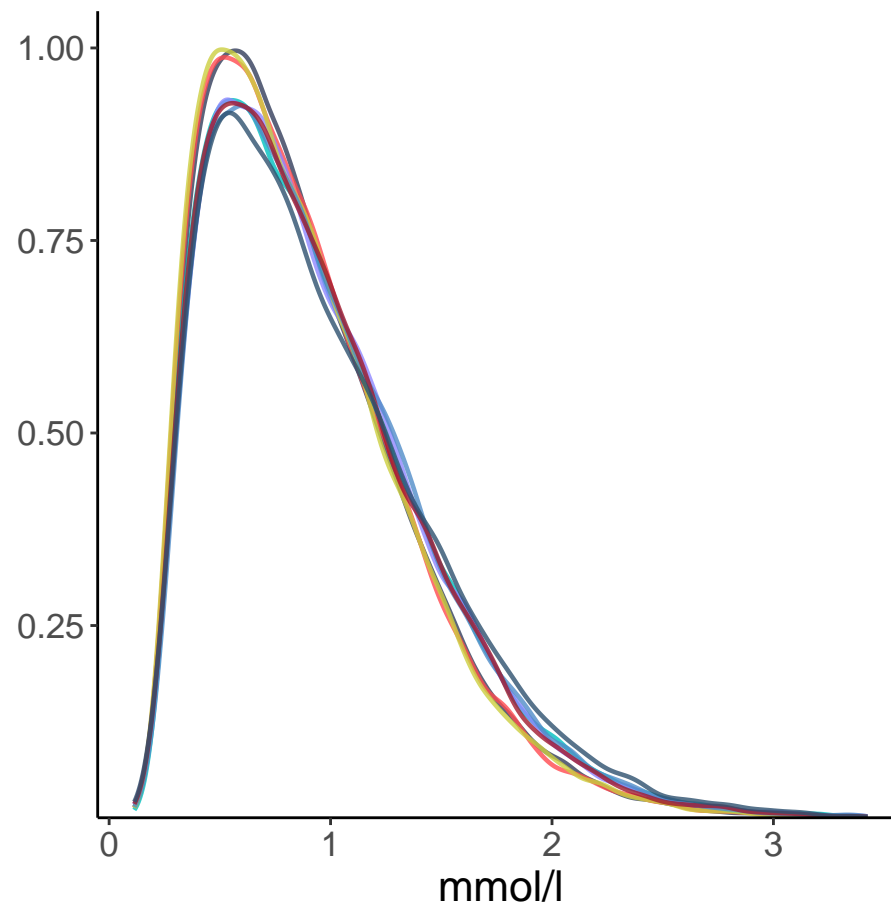
## Total\_TG

Spectrometer



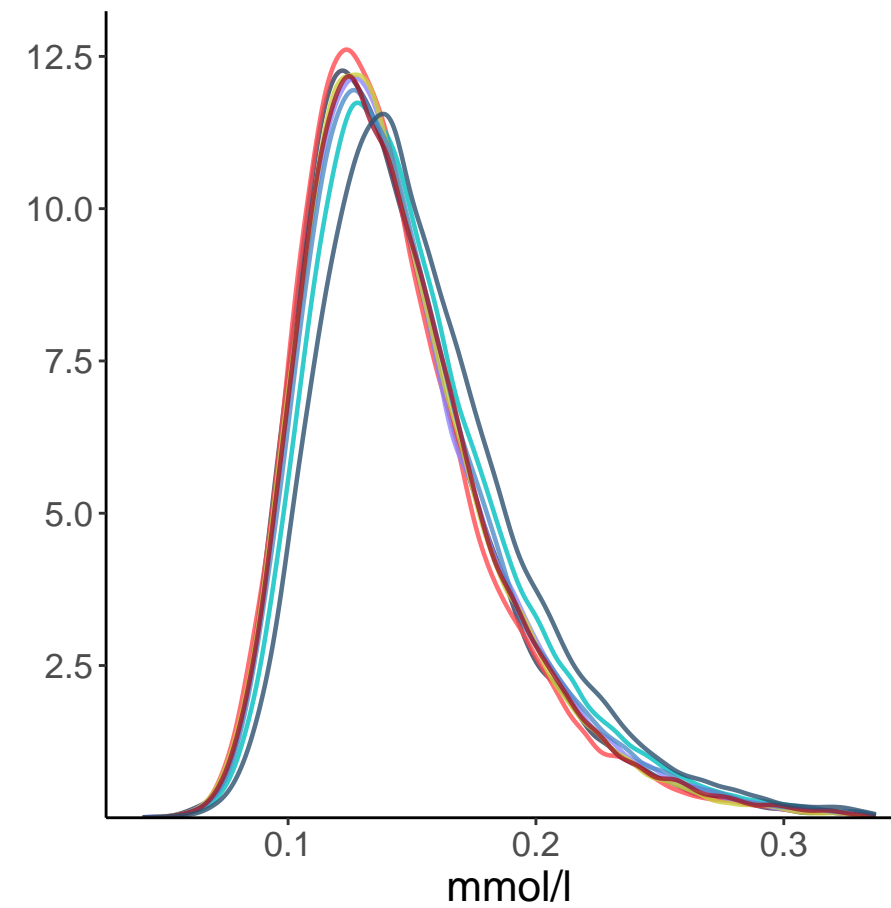
## VLDL\_TG

Spectrometer



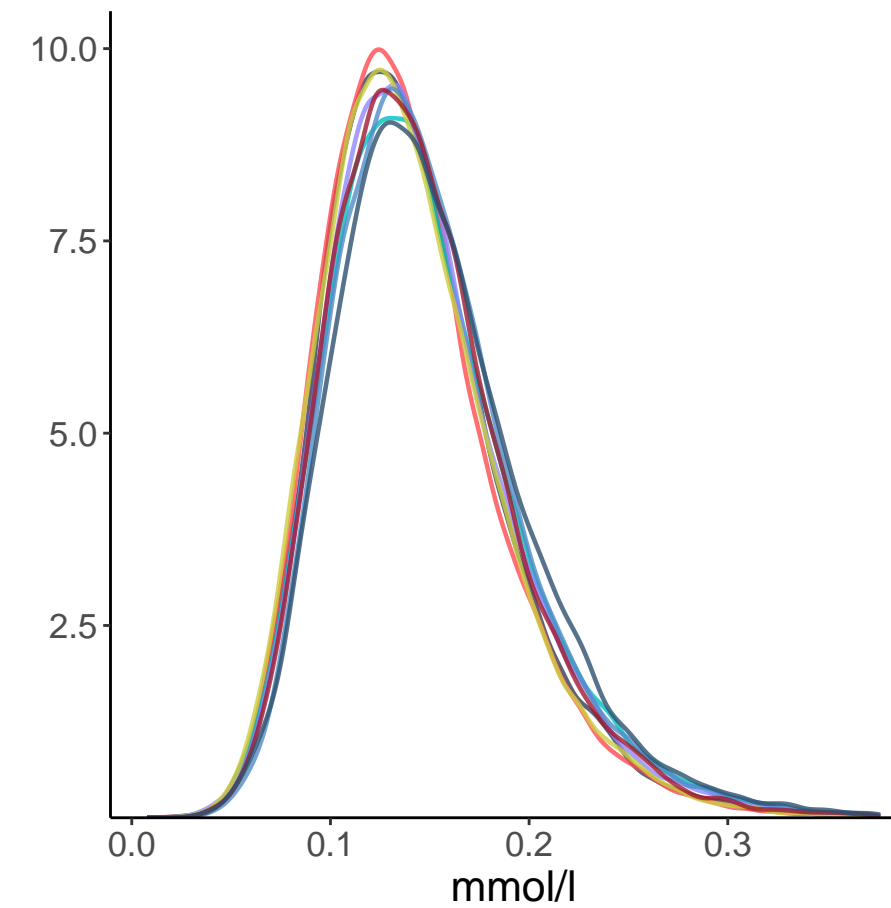
## LDL\_TG

Spectrometer



## HDL\_TG

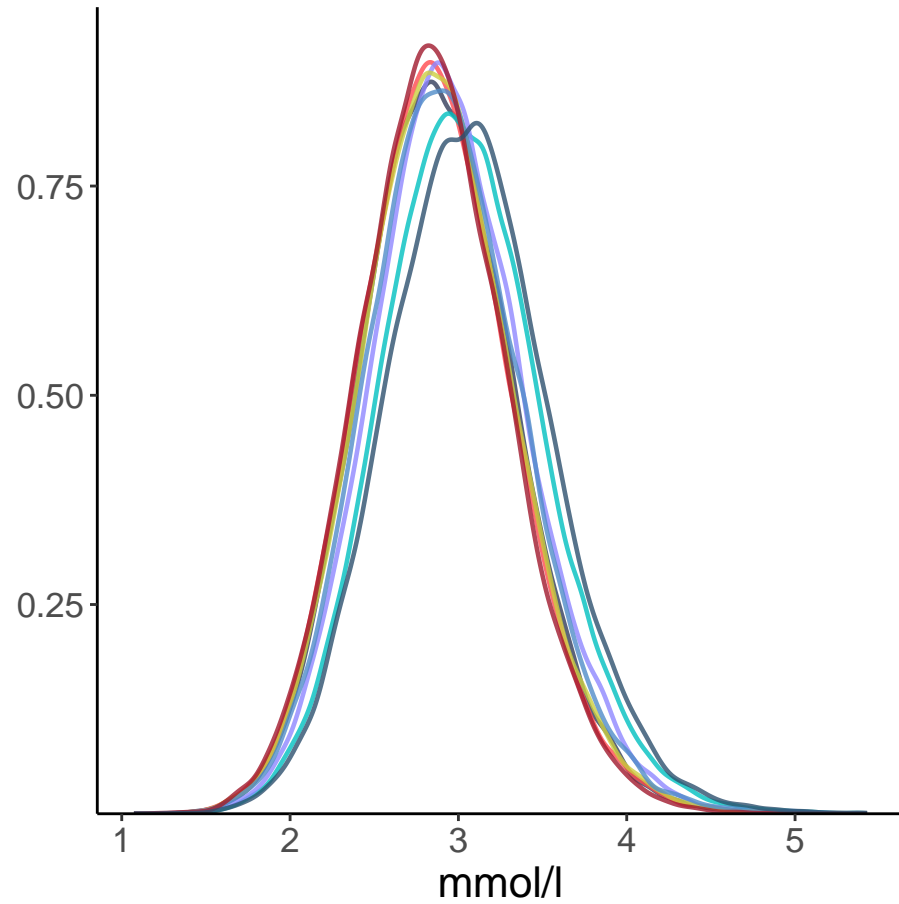
Spectrometer



# Phospholipids

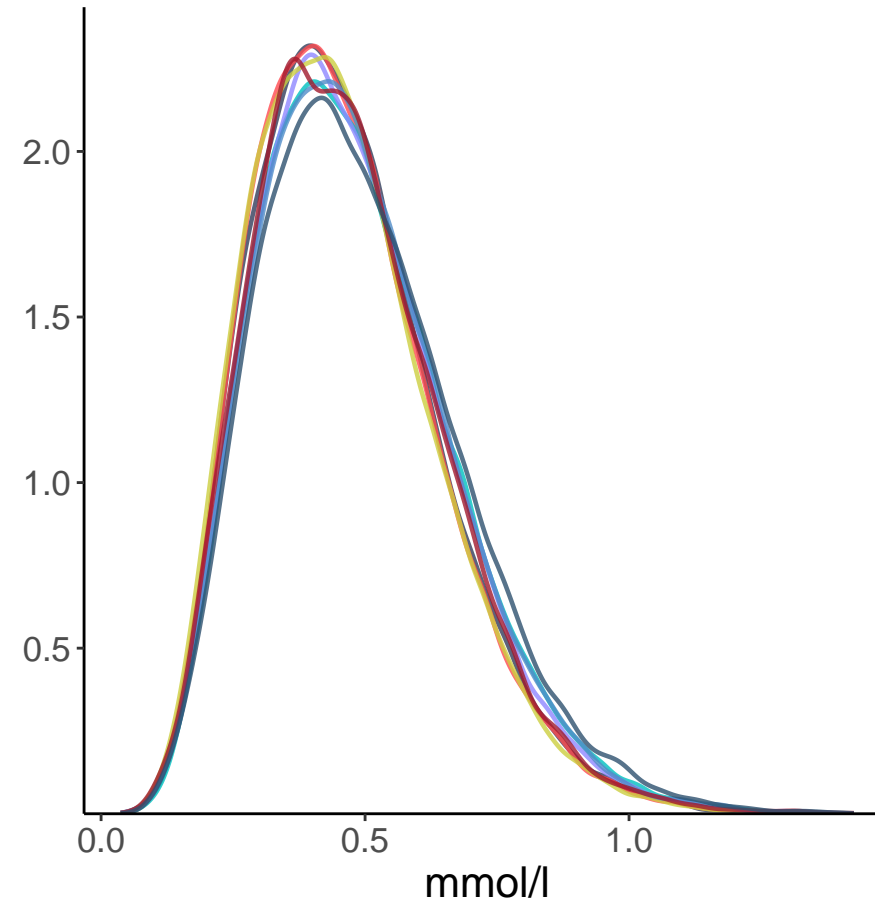
## Total\_PL

Spectrometer



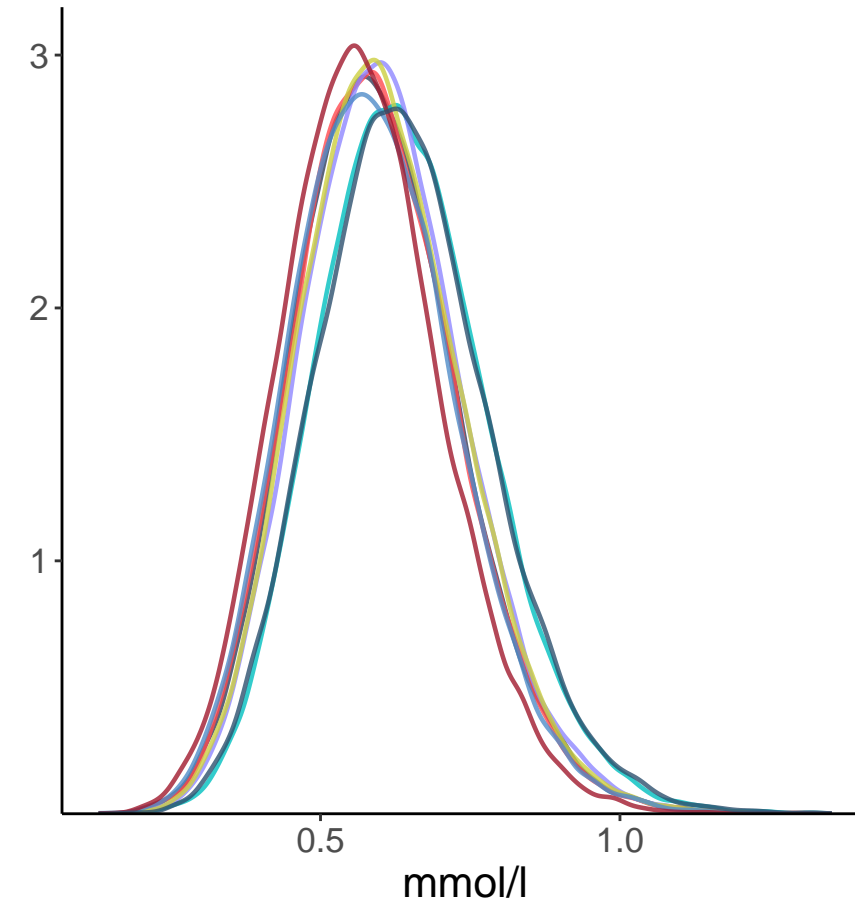
## VLDL\_PL

Spectrometer



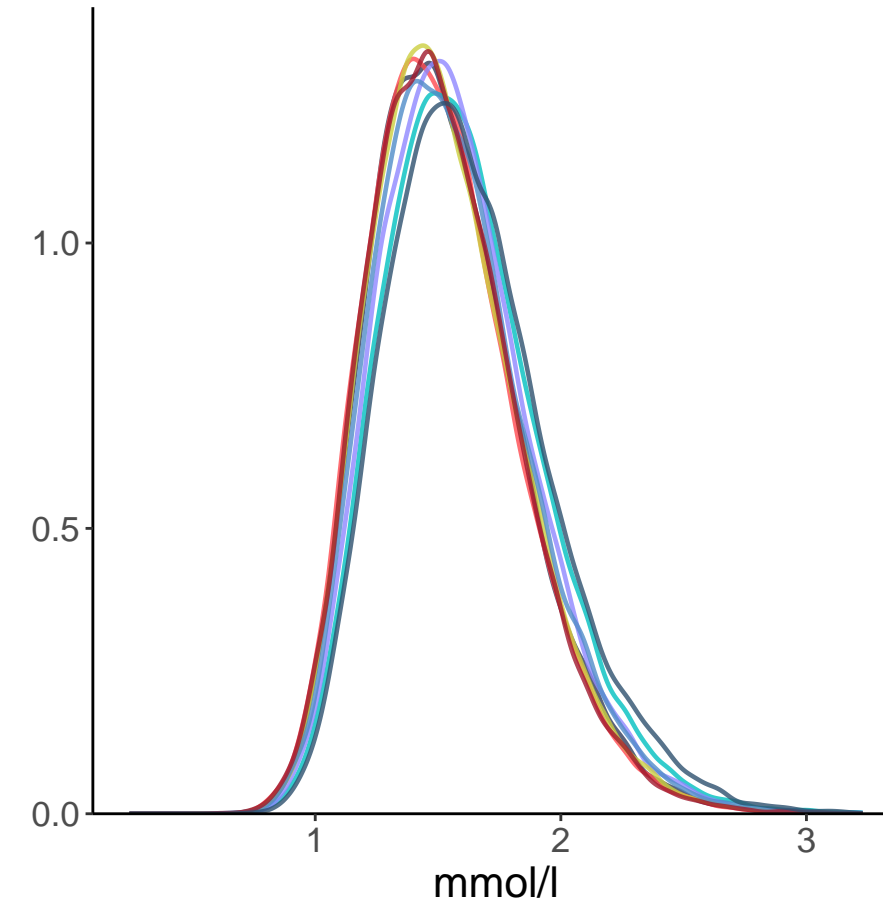
## LDL\_PL

Spectrometer



## HDL\_PL

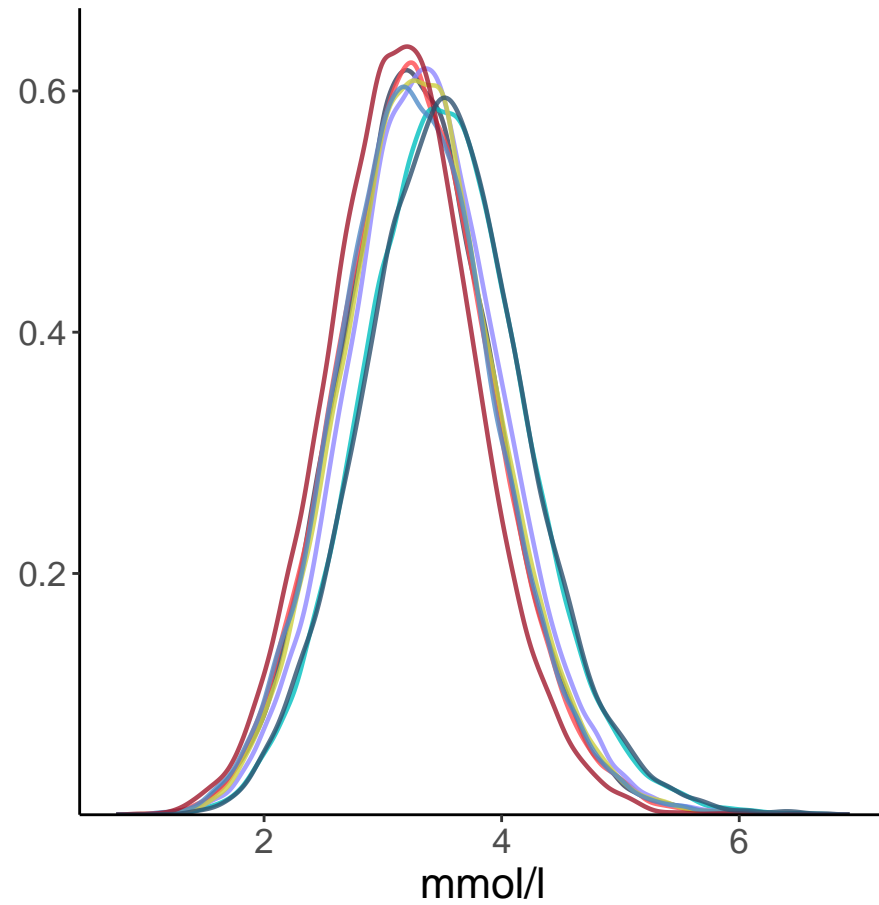
Spectrometer



# Cholesteryl esters

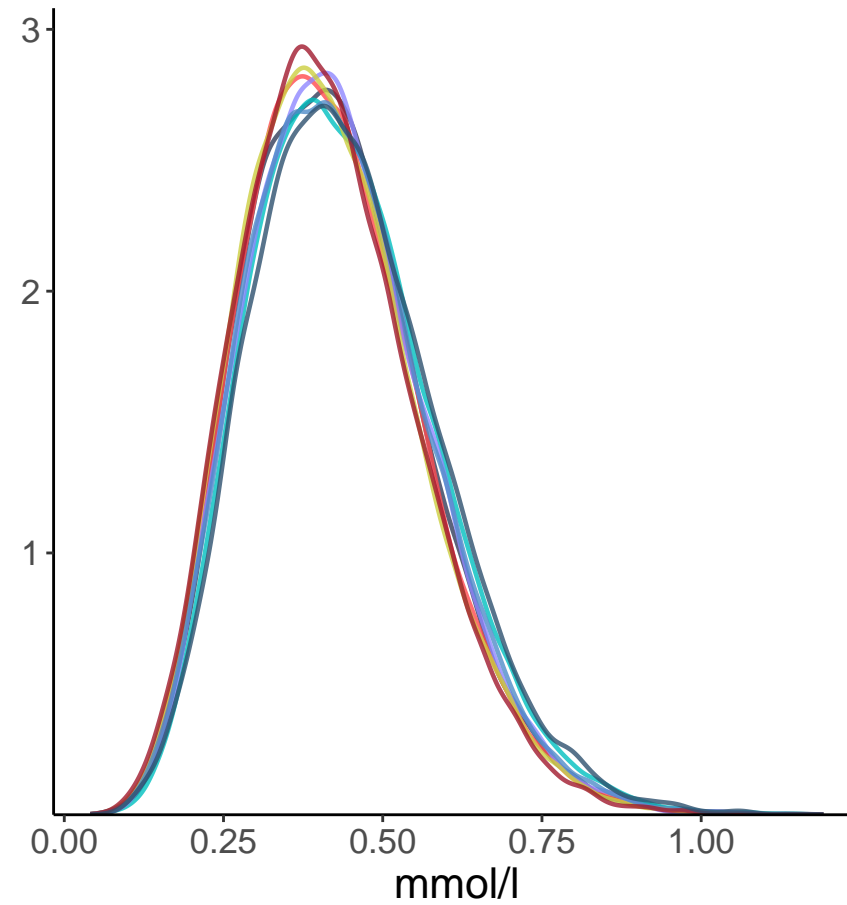
## Total\_CE

Spectrometer



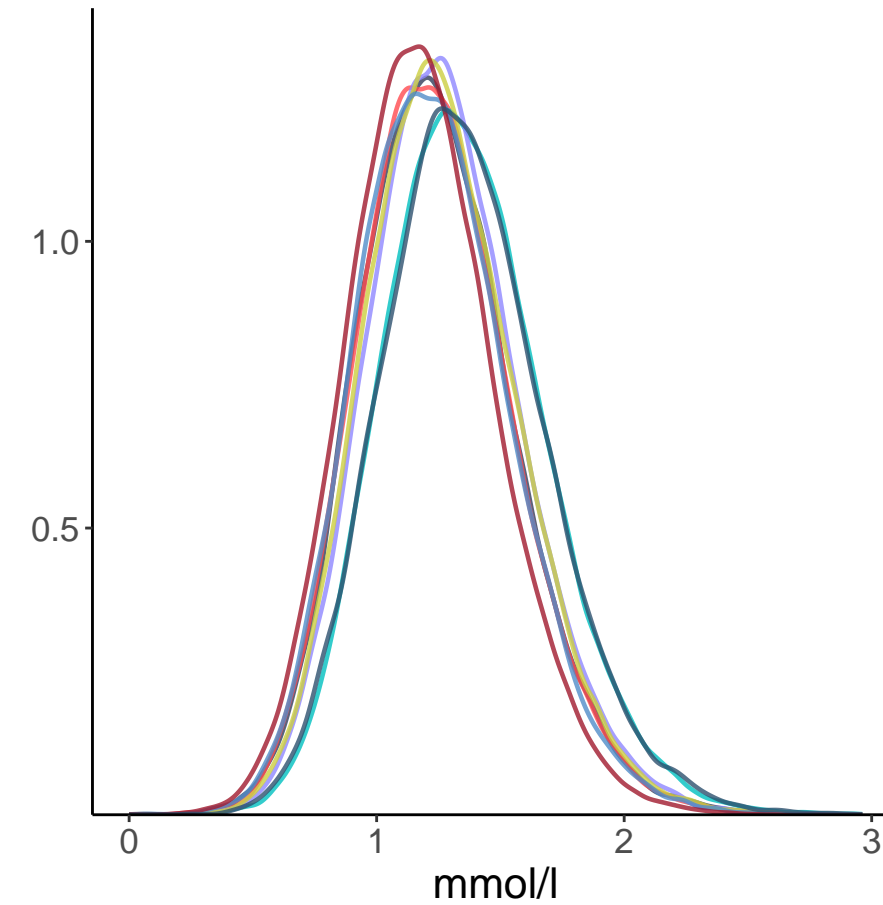
## VLDL\_CE

Spectrometer



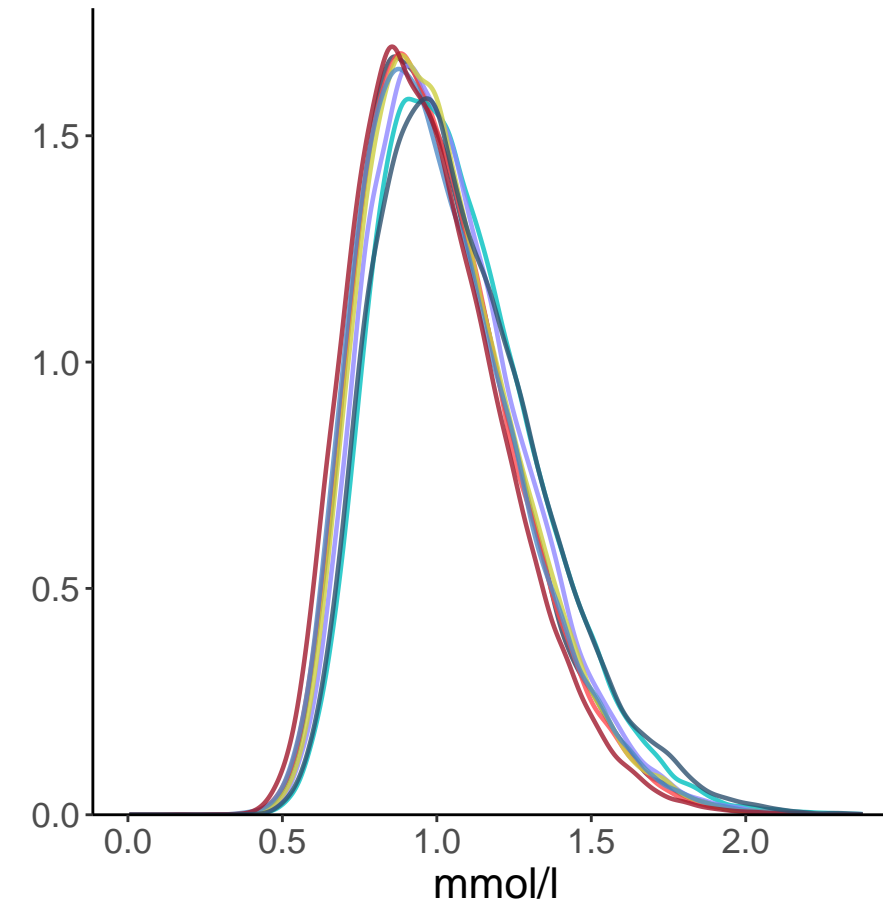
## LDL\_CE

Spectrometer



## HDL\_CE

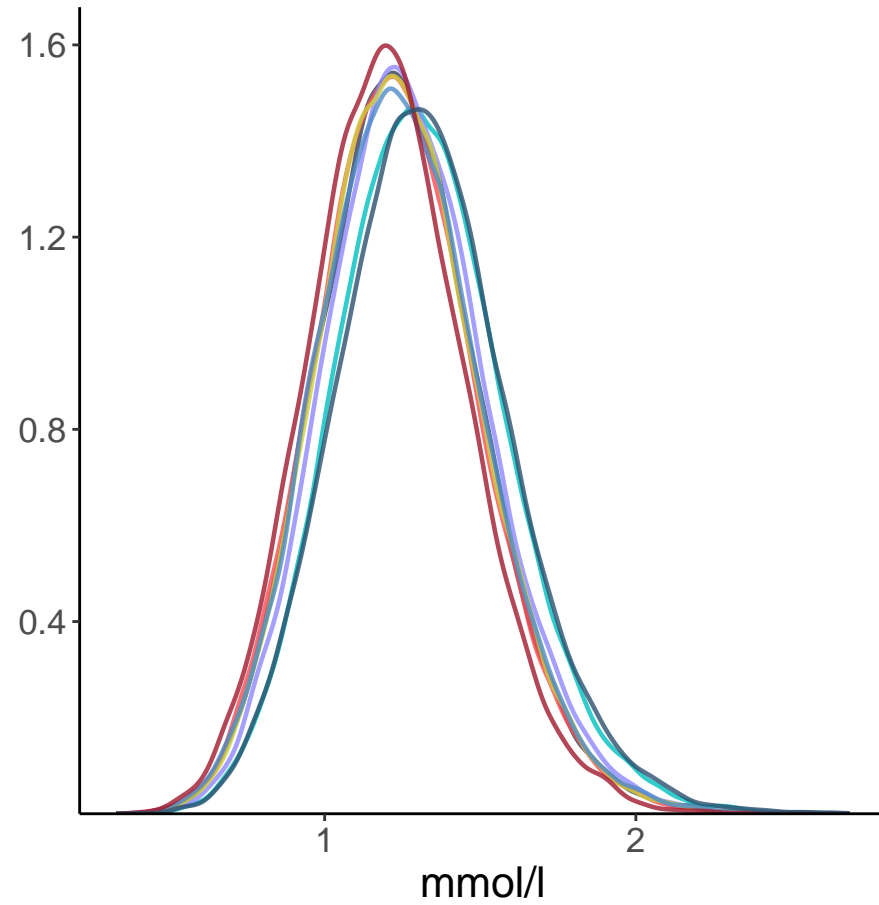
Spectrometer



# Free cholesterol

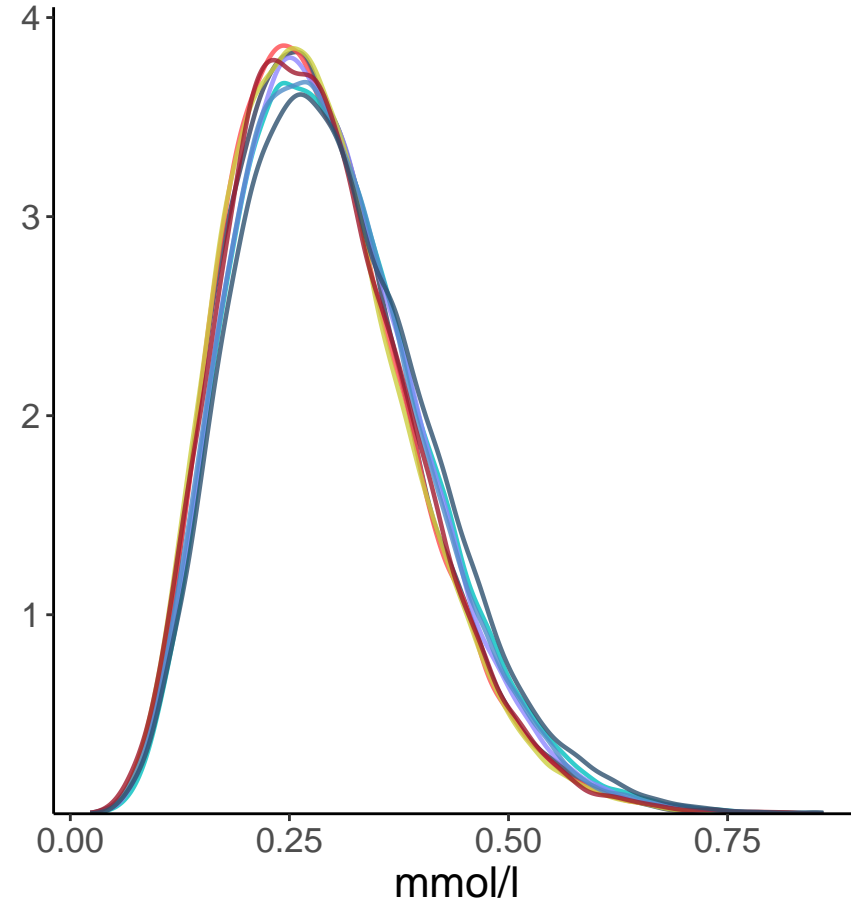
## Total\_FC

Spectrometer



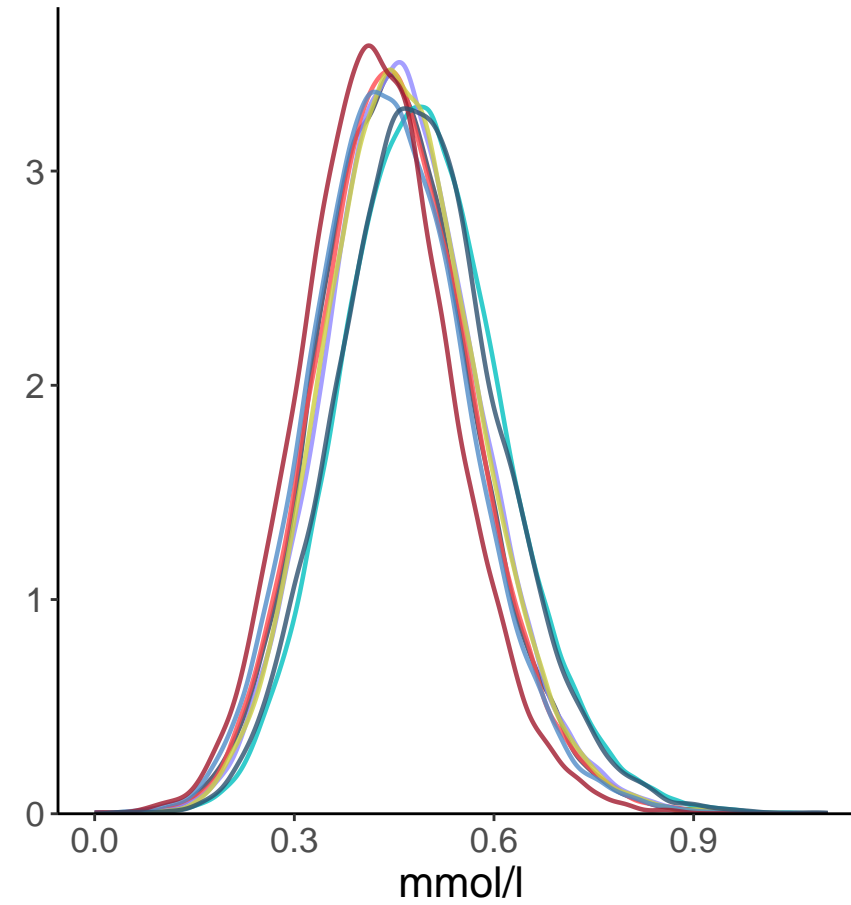
## VLDL\_FC

Spectrometer



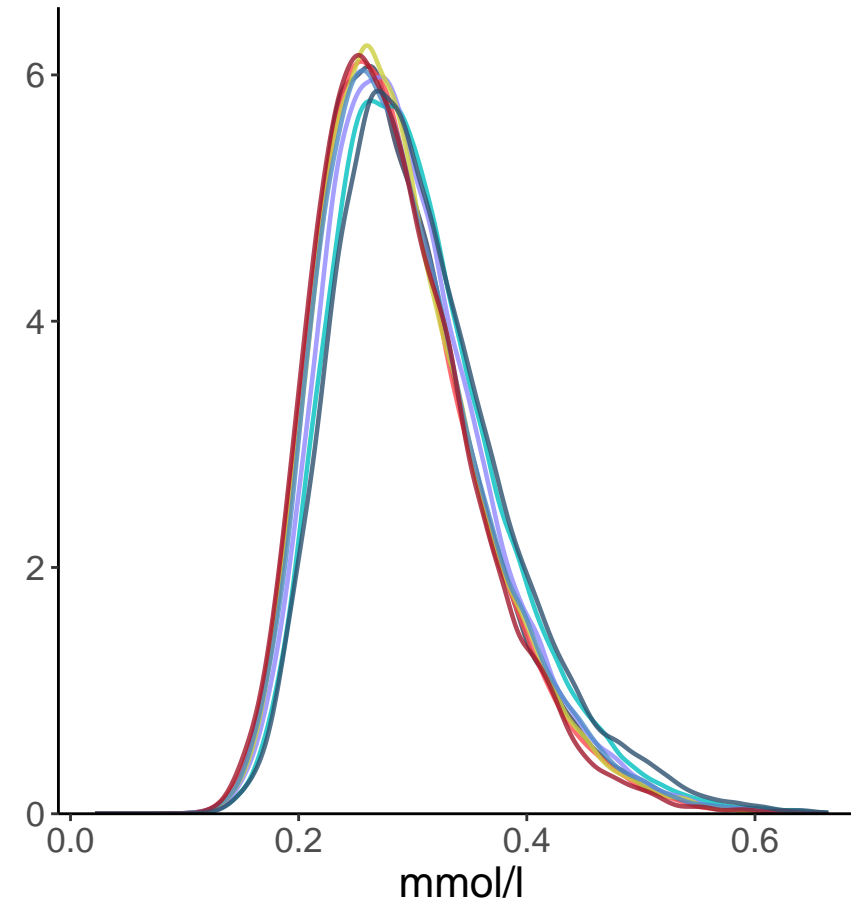
## LDL\_FC

Spectrometer



## HDL\_FC

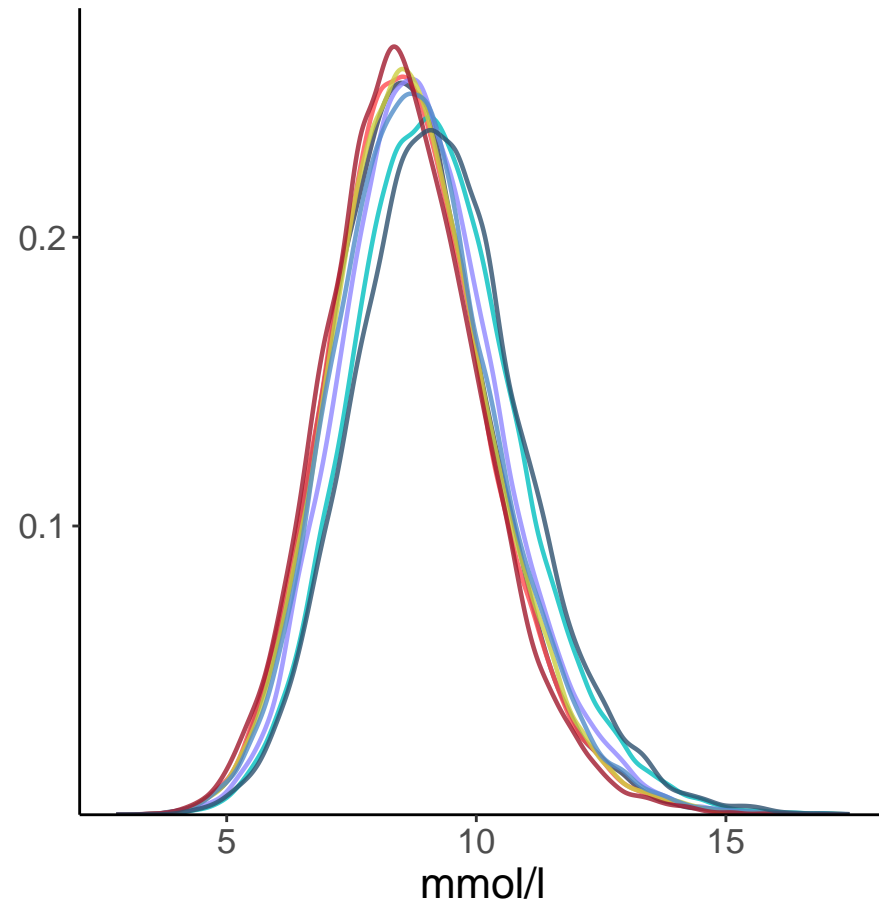
Spectrometer



# Total lipids

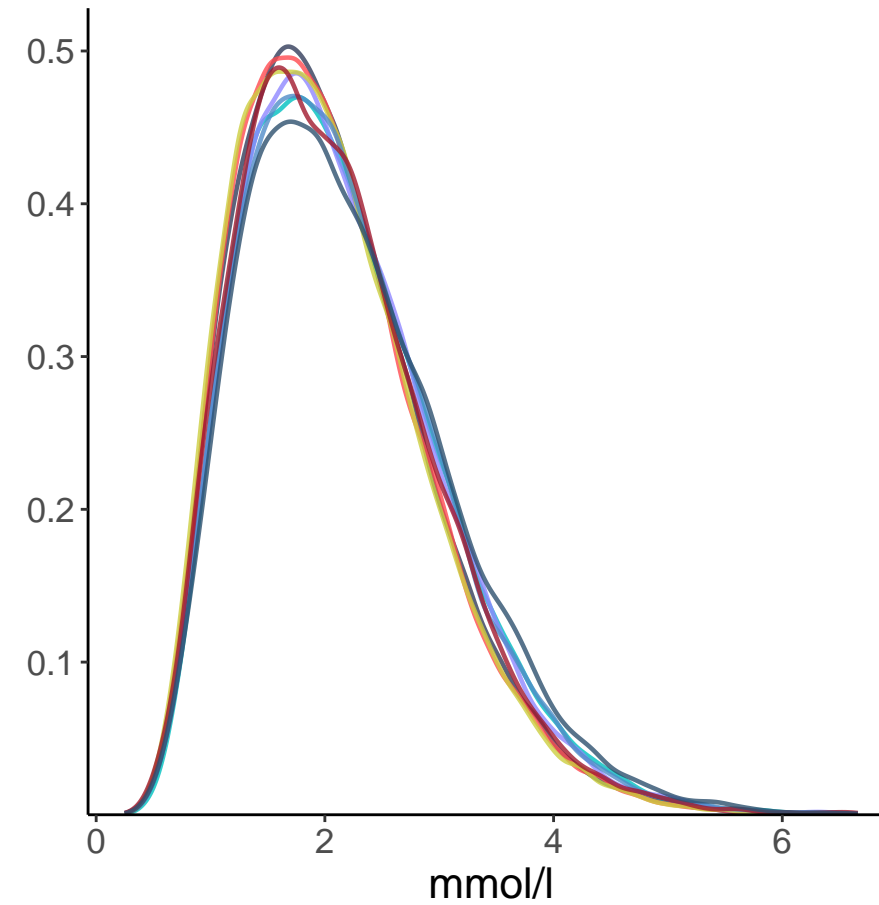
## Total\_L

Spectrometer



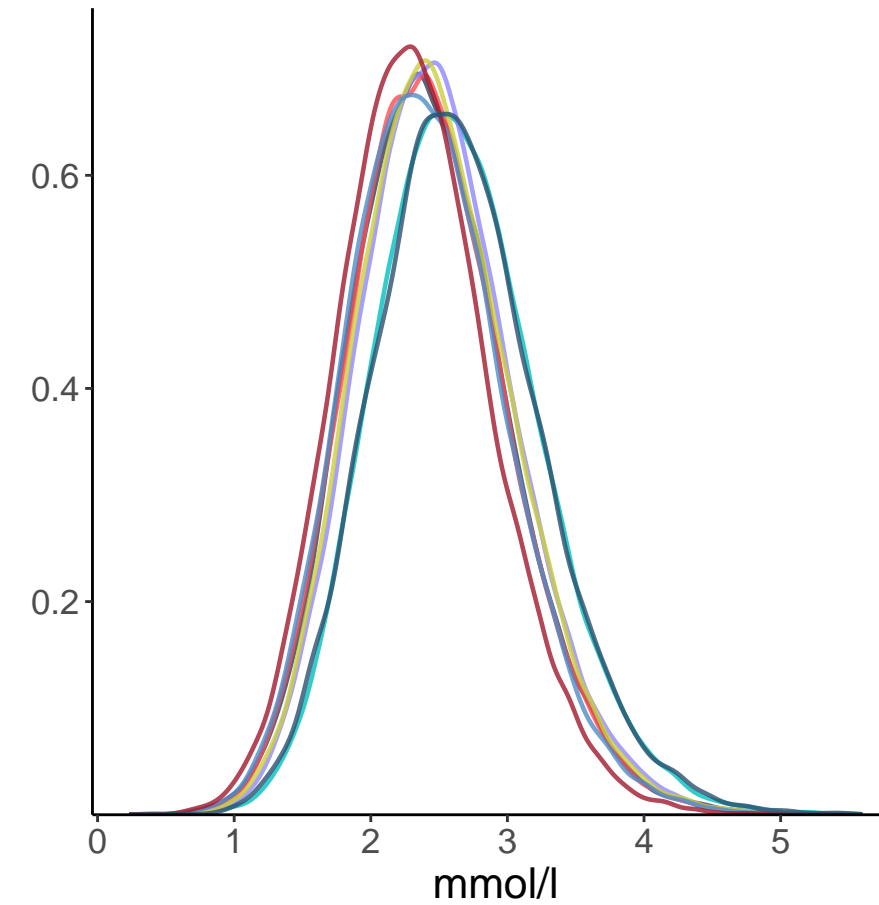
## VLDL\_L

Spectrometer



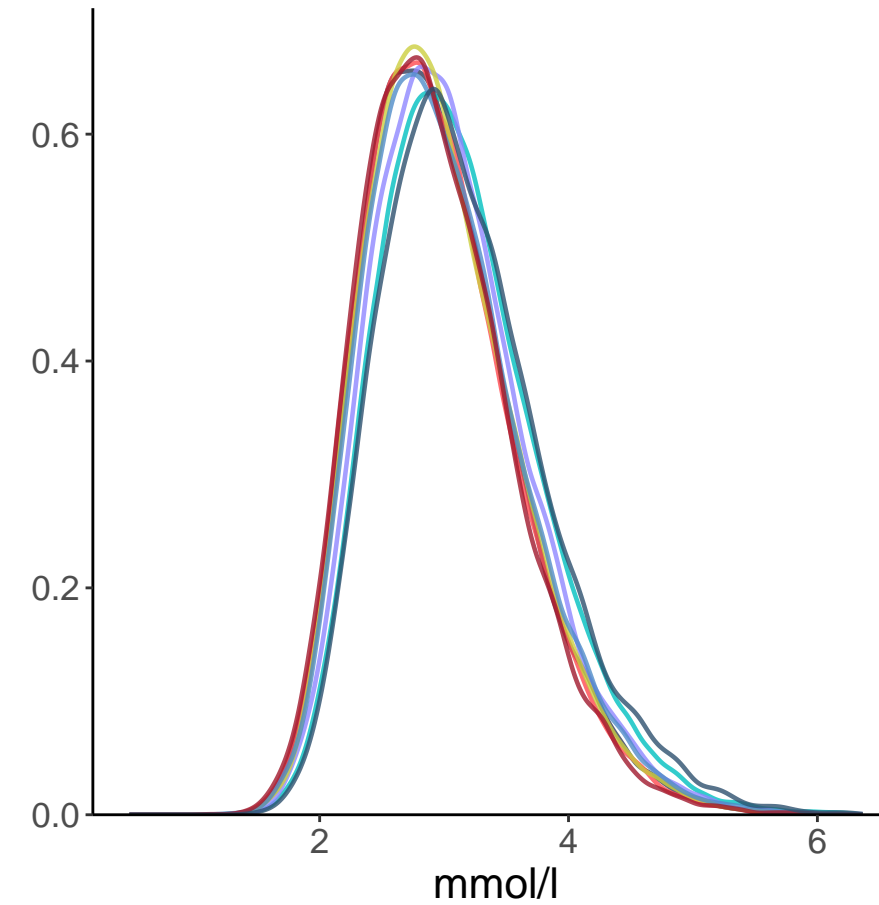
## LDL\_L

Spectrometer



## HDL\_L

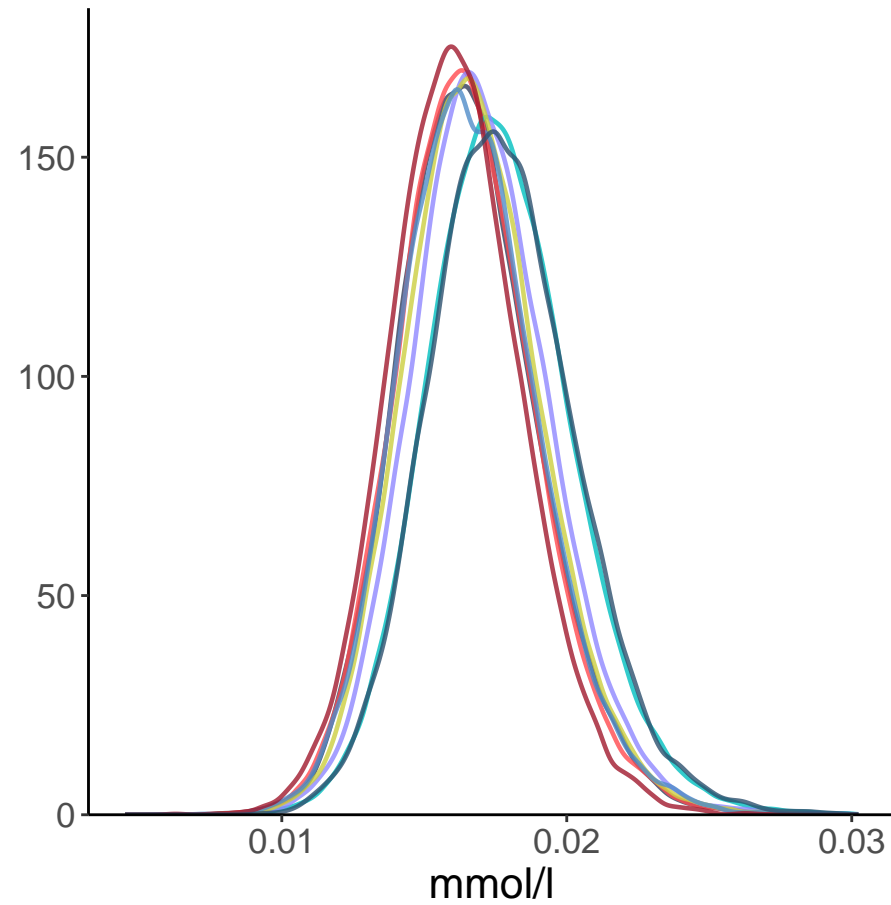
Spectrometer



# Lipoprotein particle concentrations

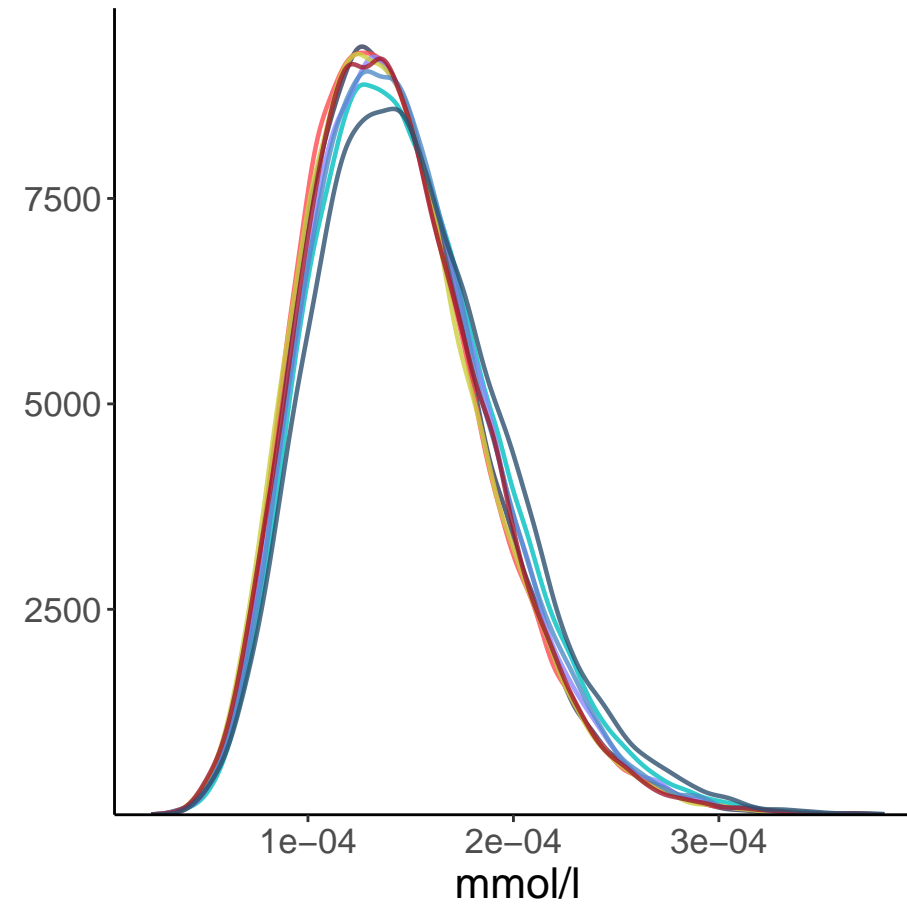
## Total\_P

Spectrometer



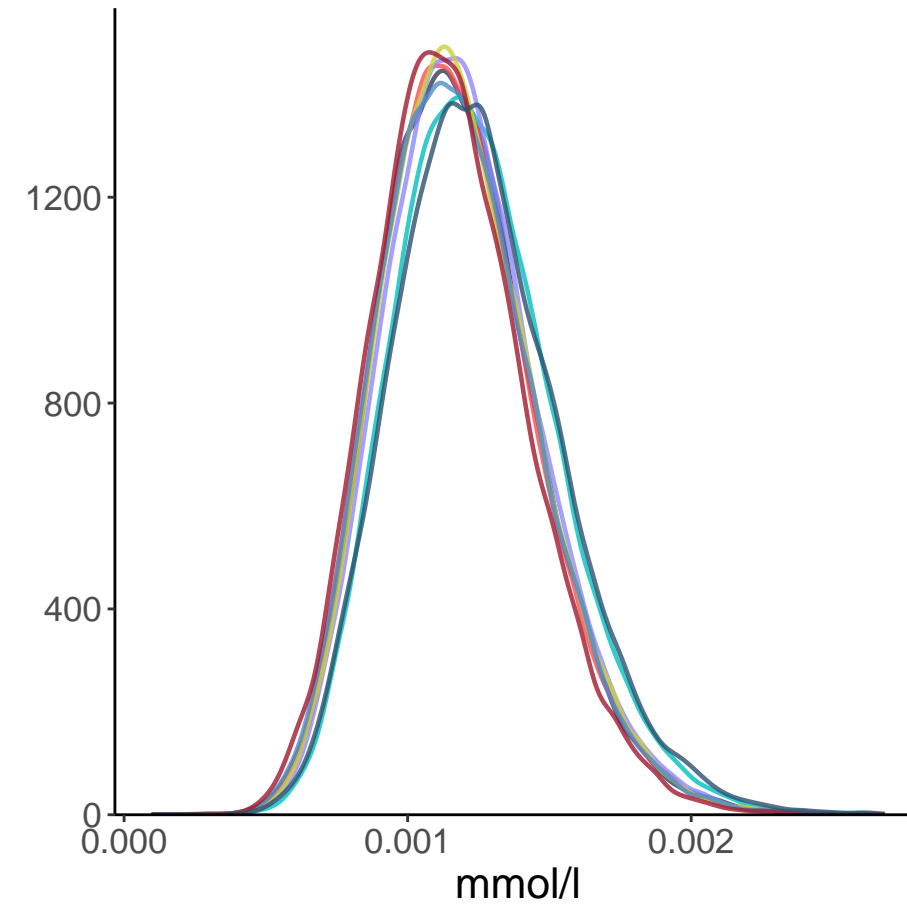
## VLDL\_P

Spectrometer



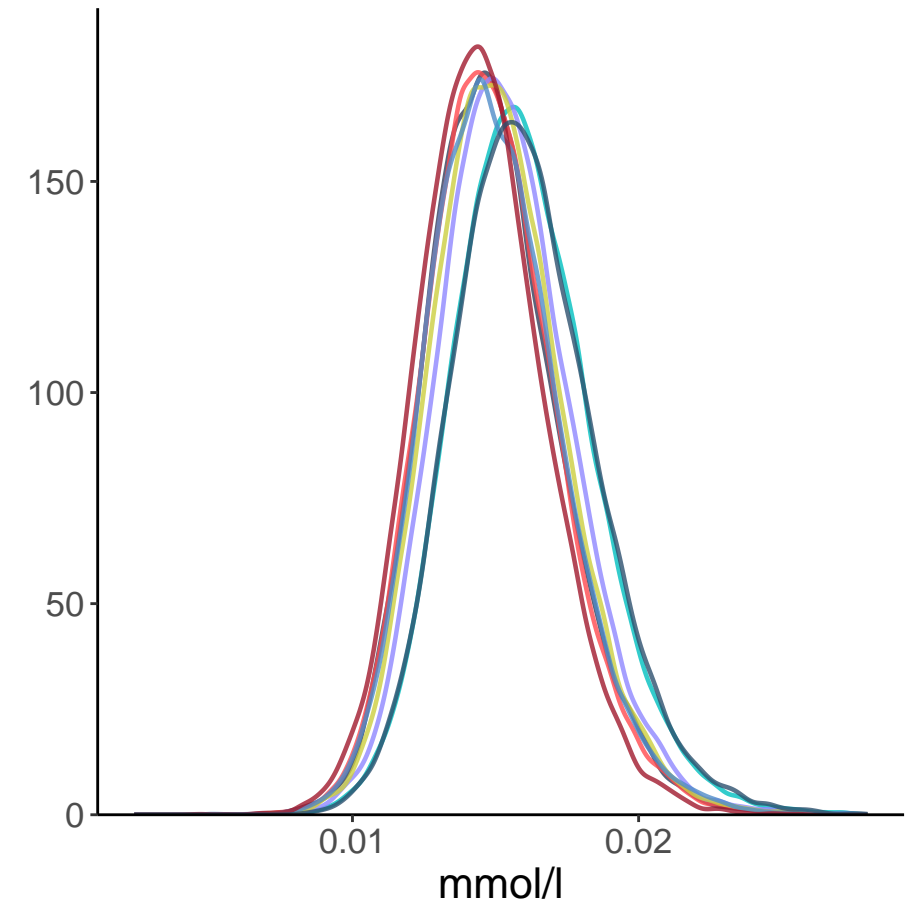
## LDL\_P

Spectrometer



## HDL\_P

Spectrometer

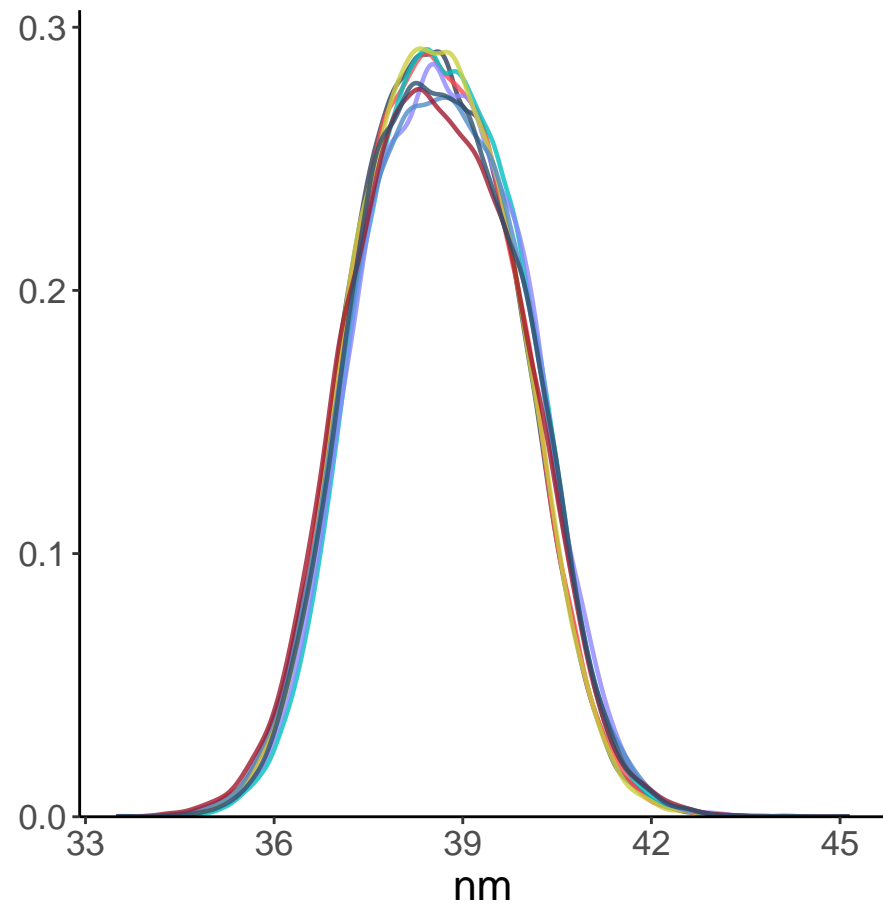




# Lipoprotein particle sizes

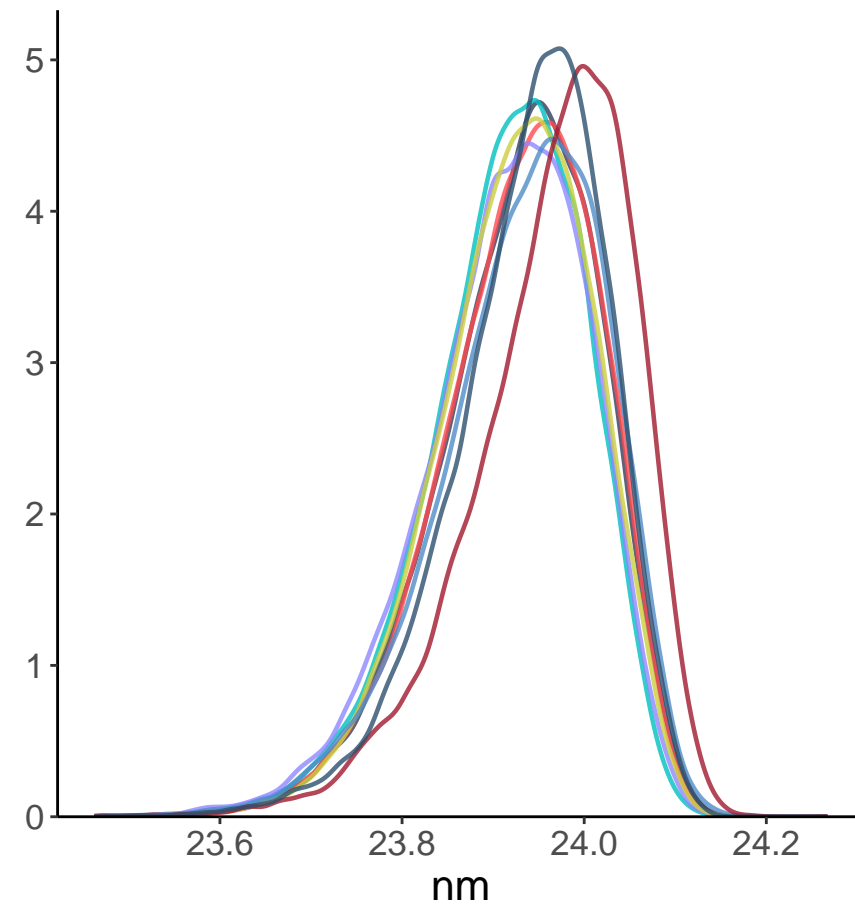
## VLDL\_size

Spectrometer



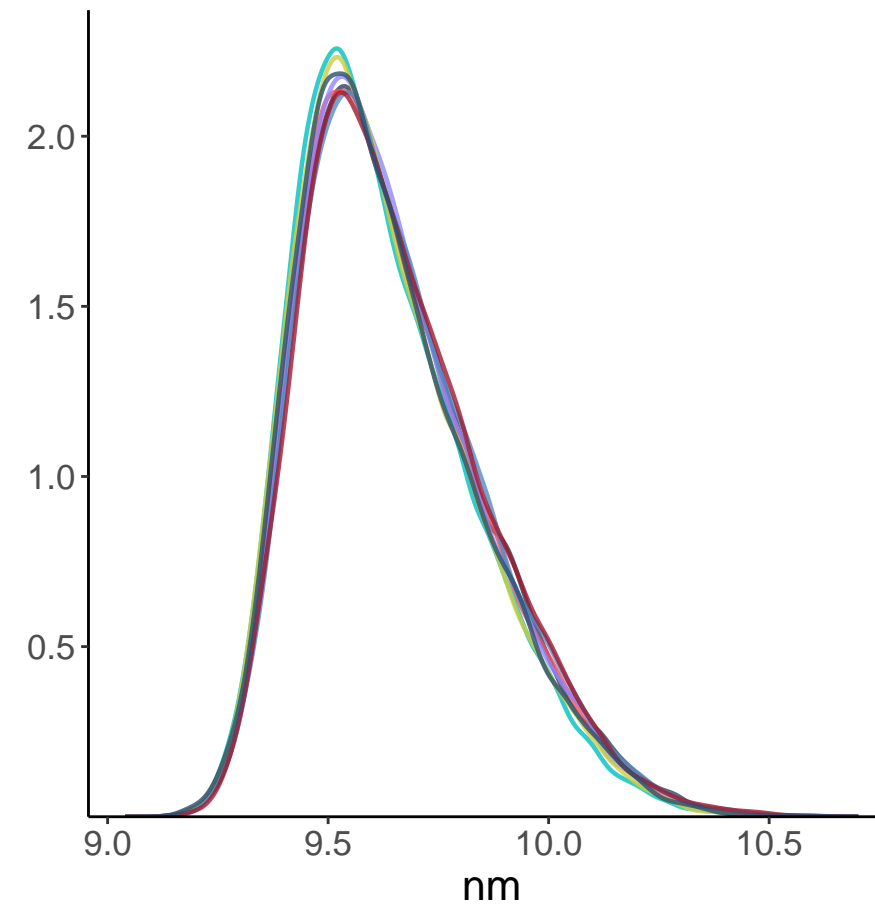
## LDL\_size

Spectrometer



## HDL\_size

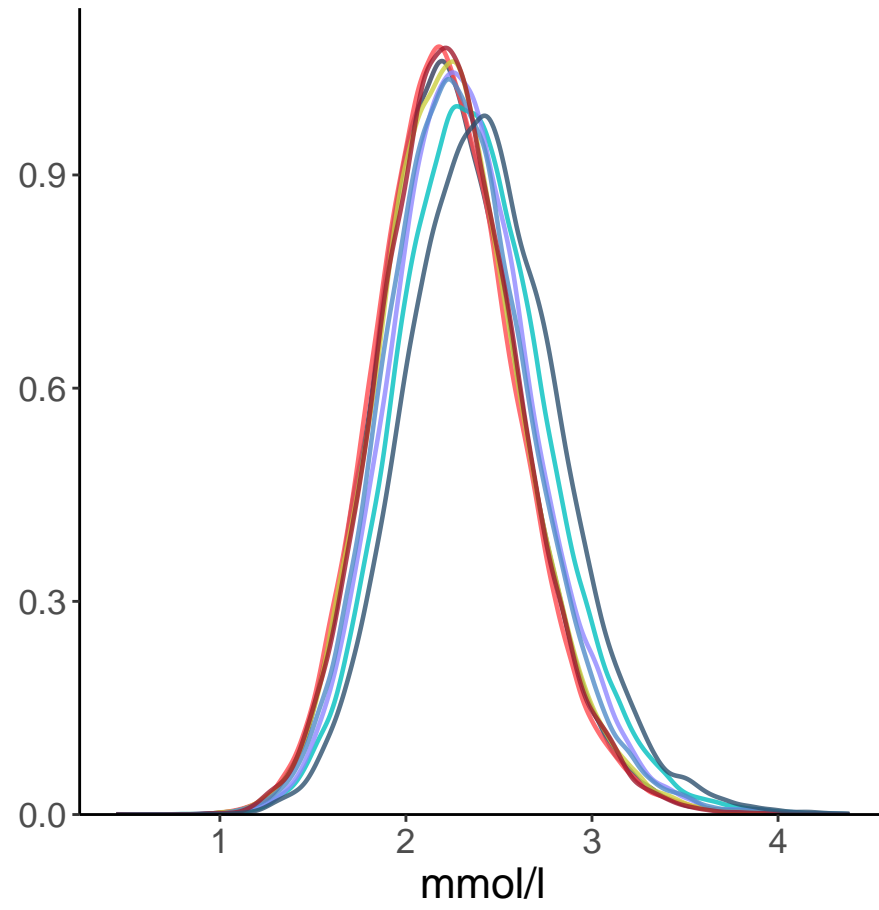
Spectrometer



# Other lipids

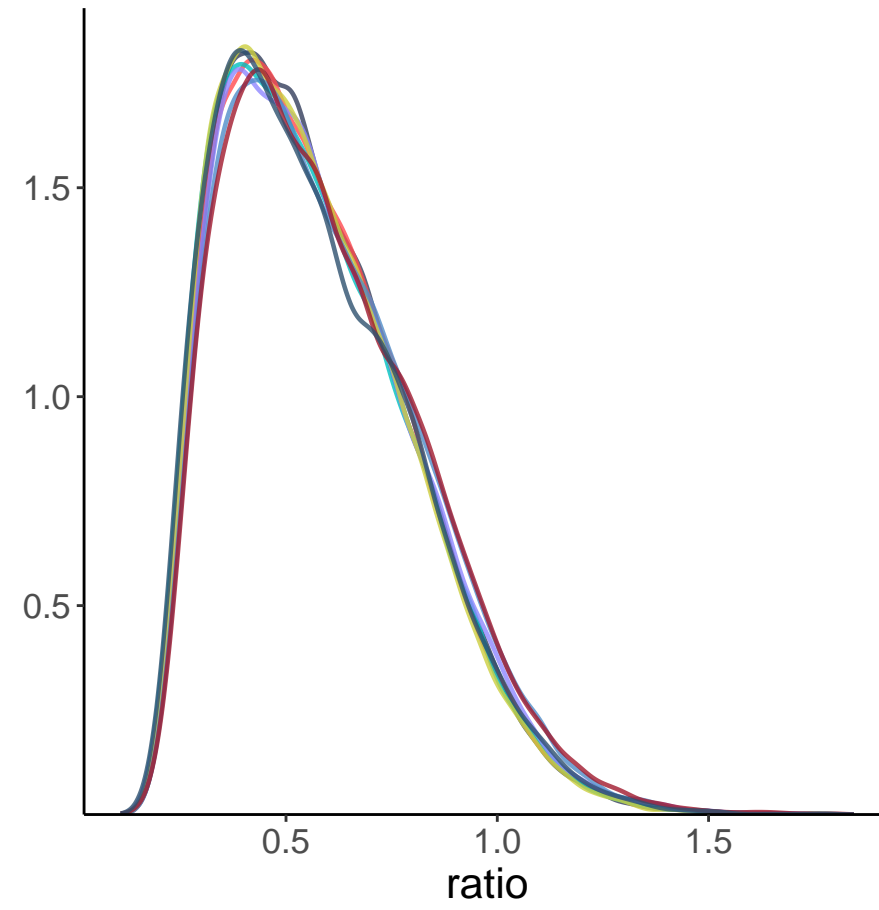
## Phosphoglyc

Spectrometer



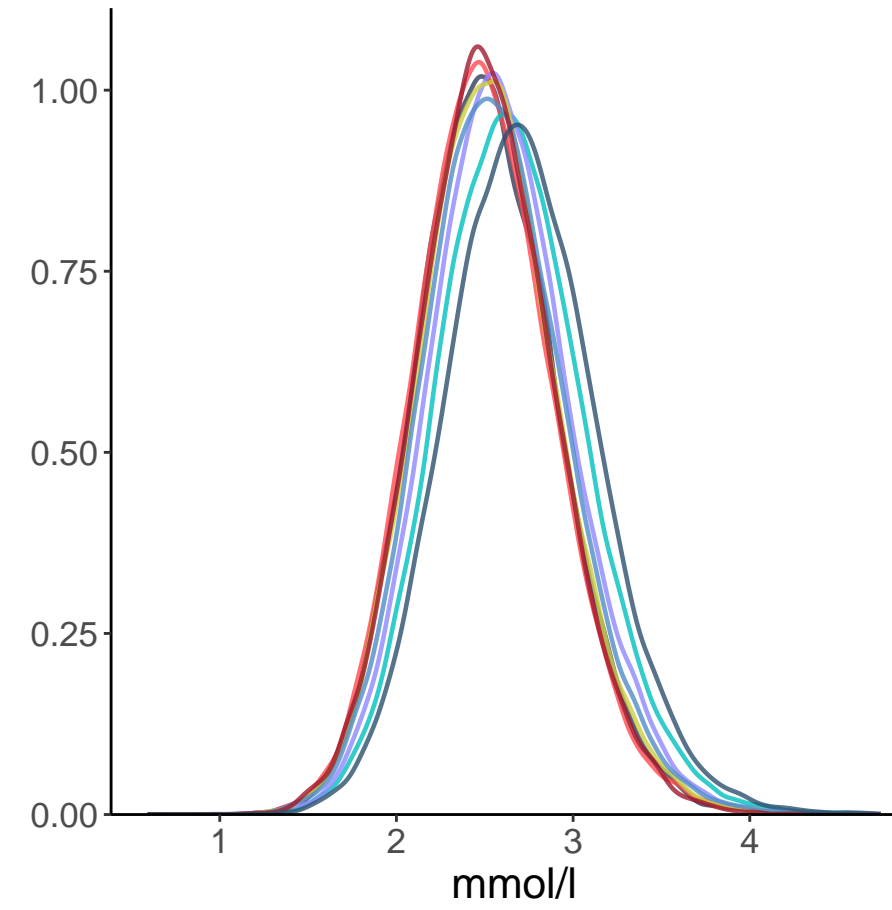
## TG\_by\_PG

Spectrometer



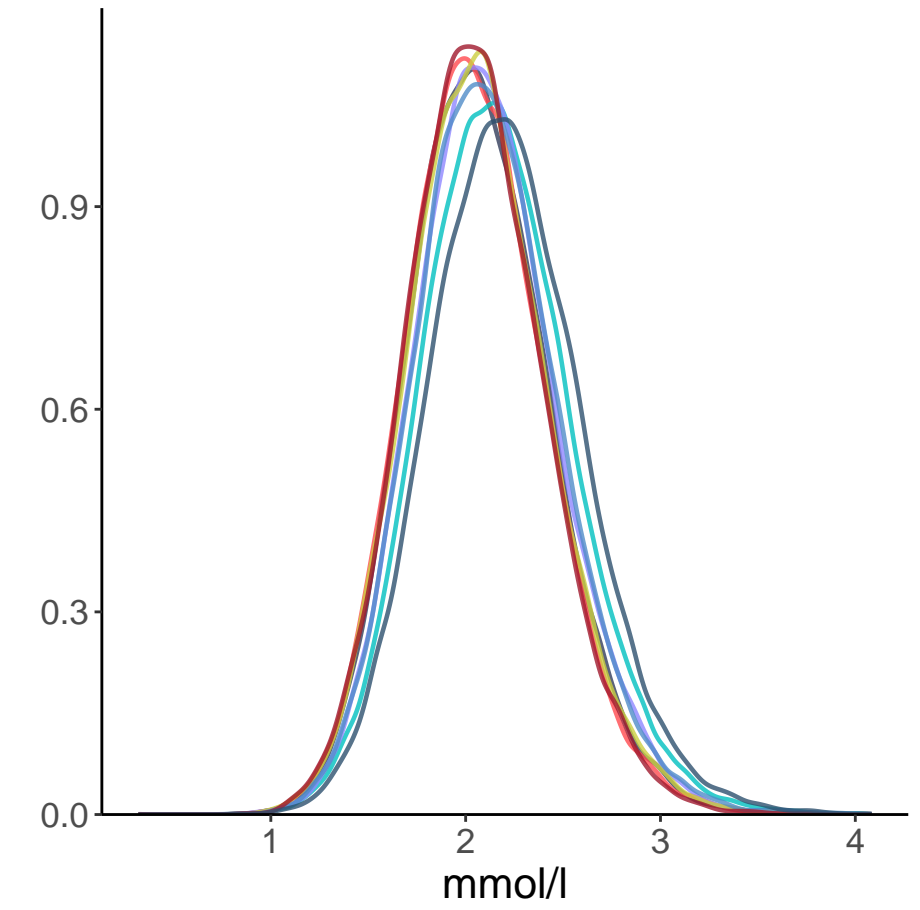
## Cholines

Spectrometer



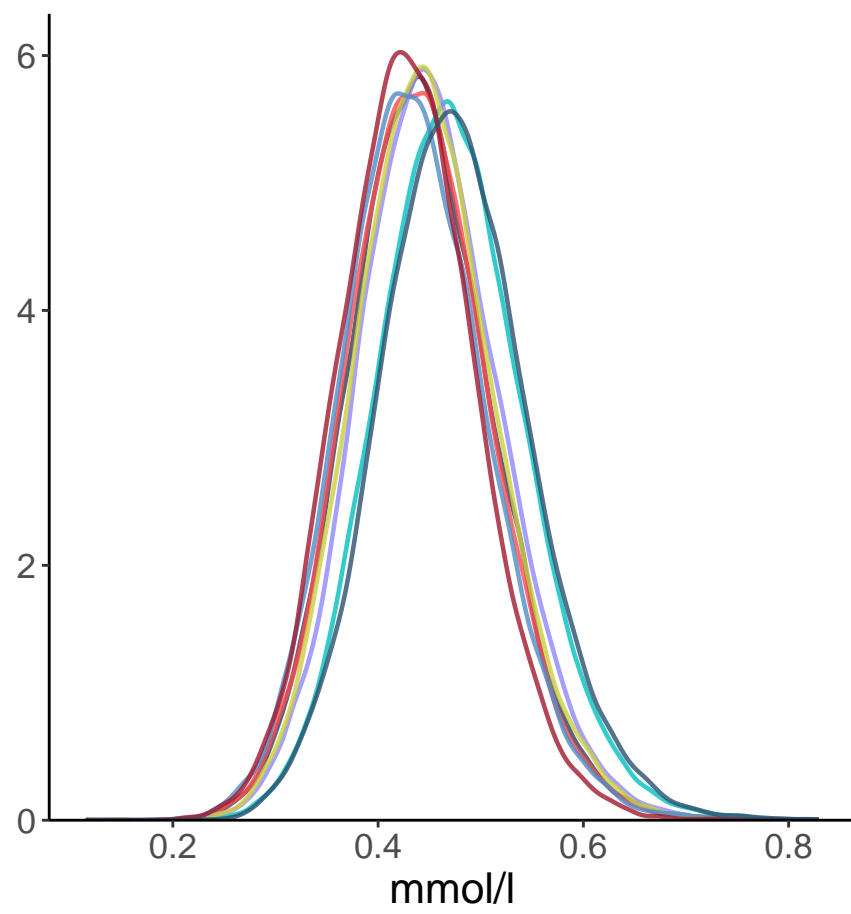
## Phosphatidylc

Spectrometer



## Spingomyelins

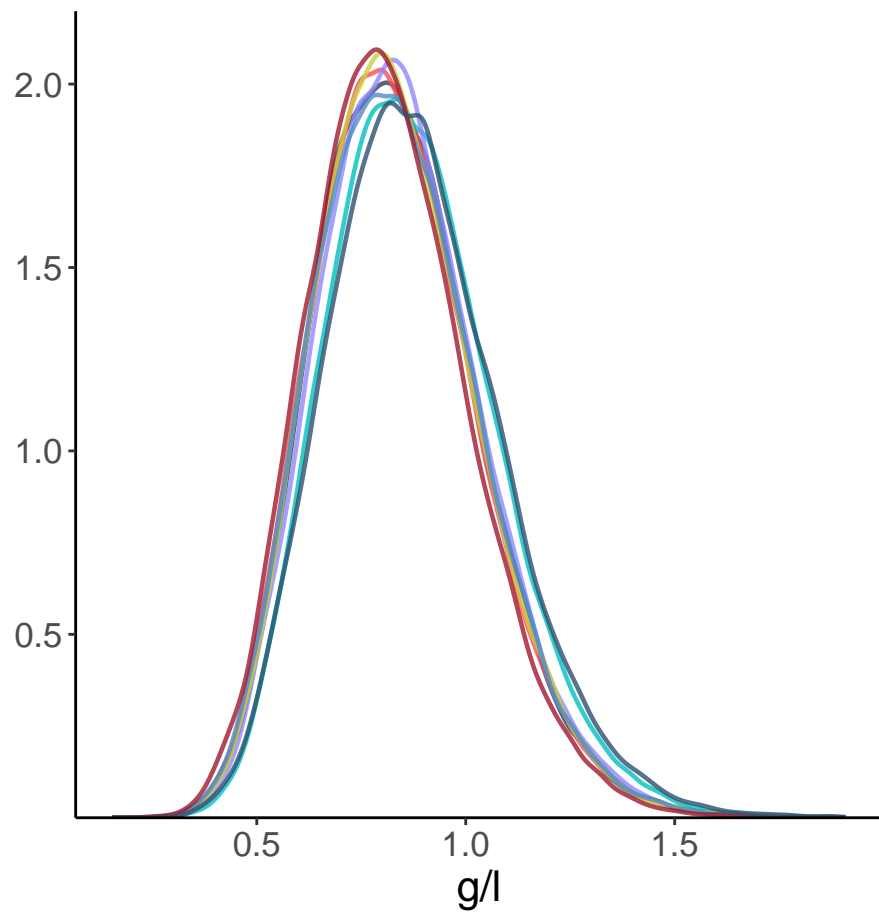
Spectrometer



# Apolipoproteins

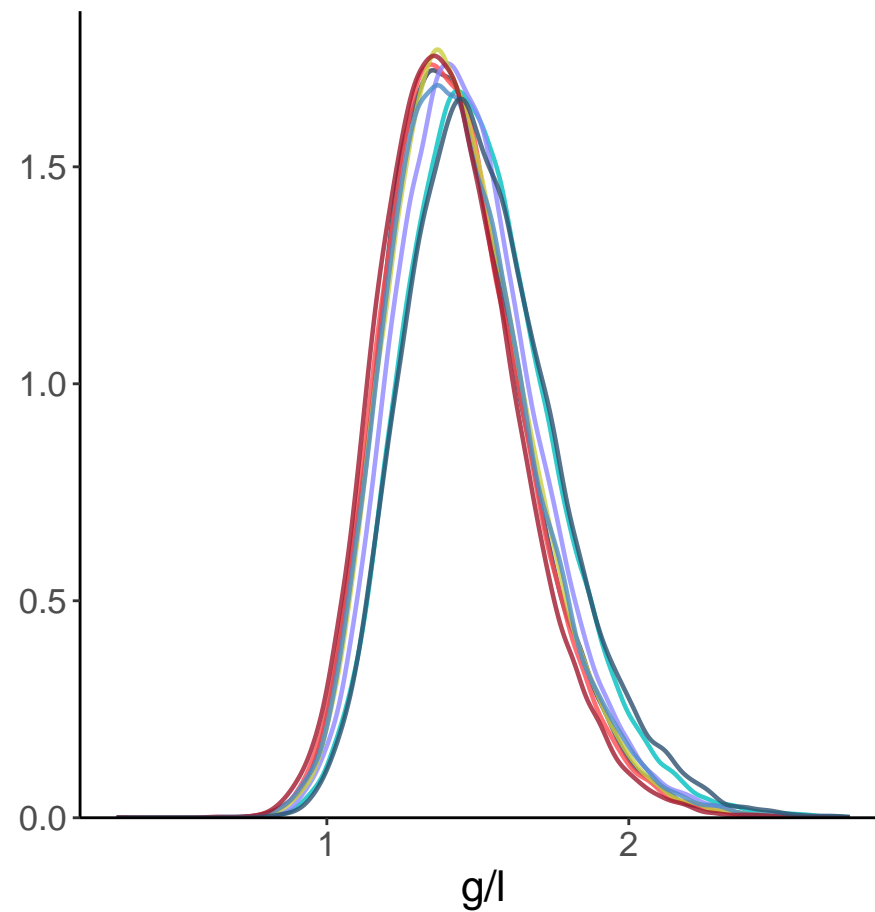
## ApoB

Spectrometer



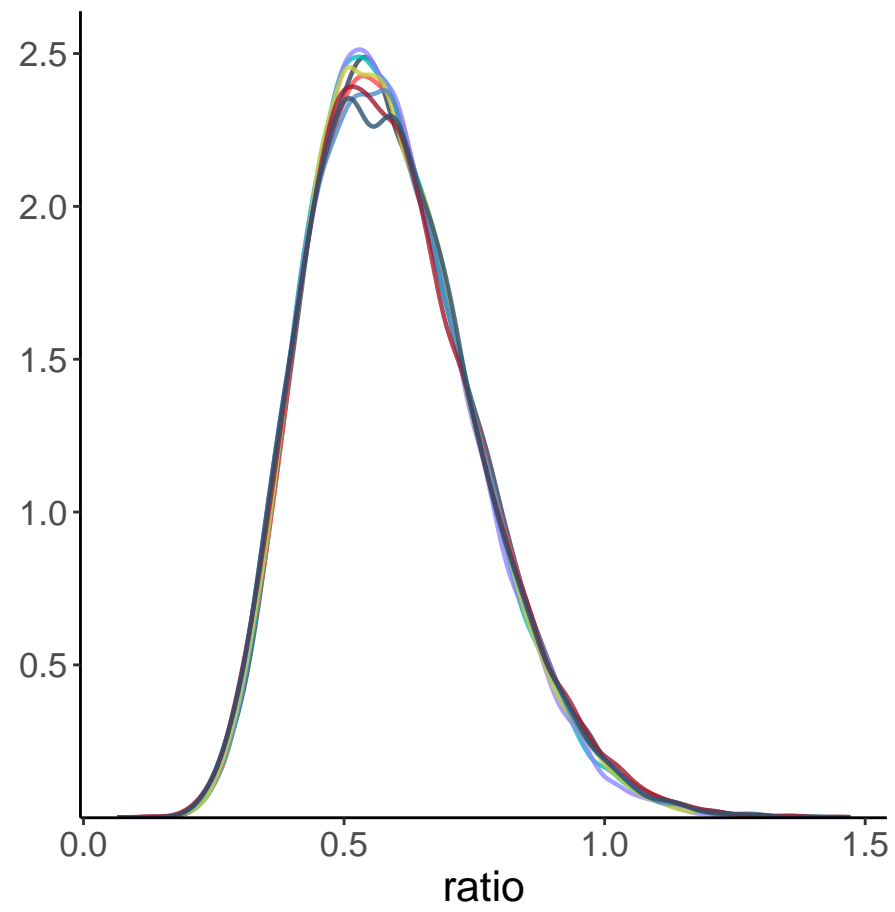
## ApoA1

Spectrometer



## ApoB\_by\_ApoA1

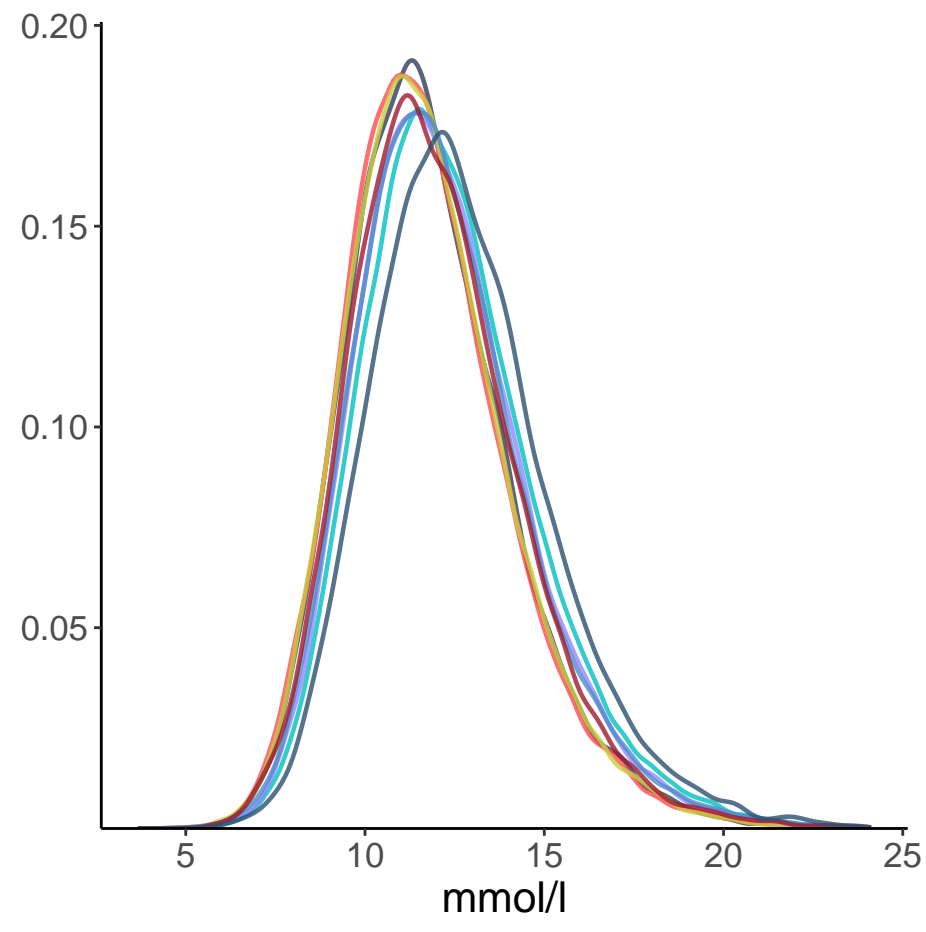
Spectrometer



# Fatty acids

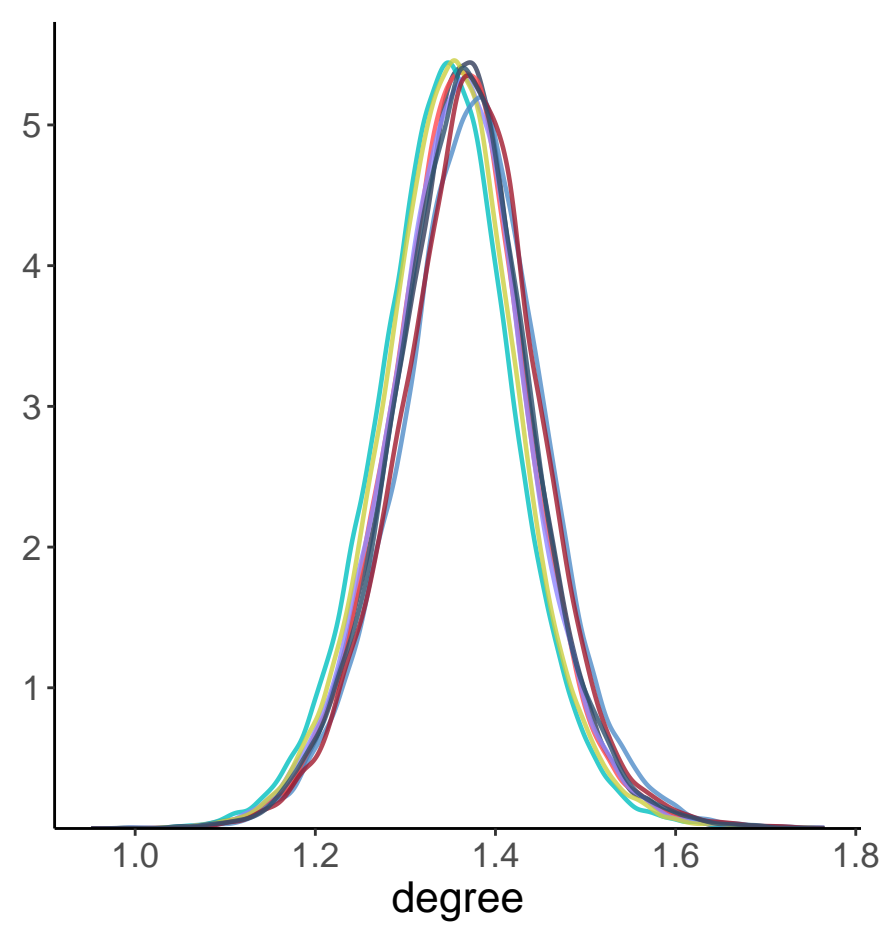
## Total\_FA

Spectrometer



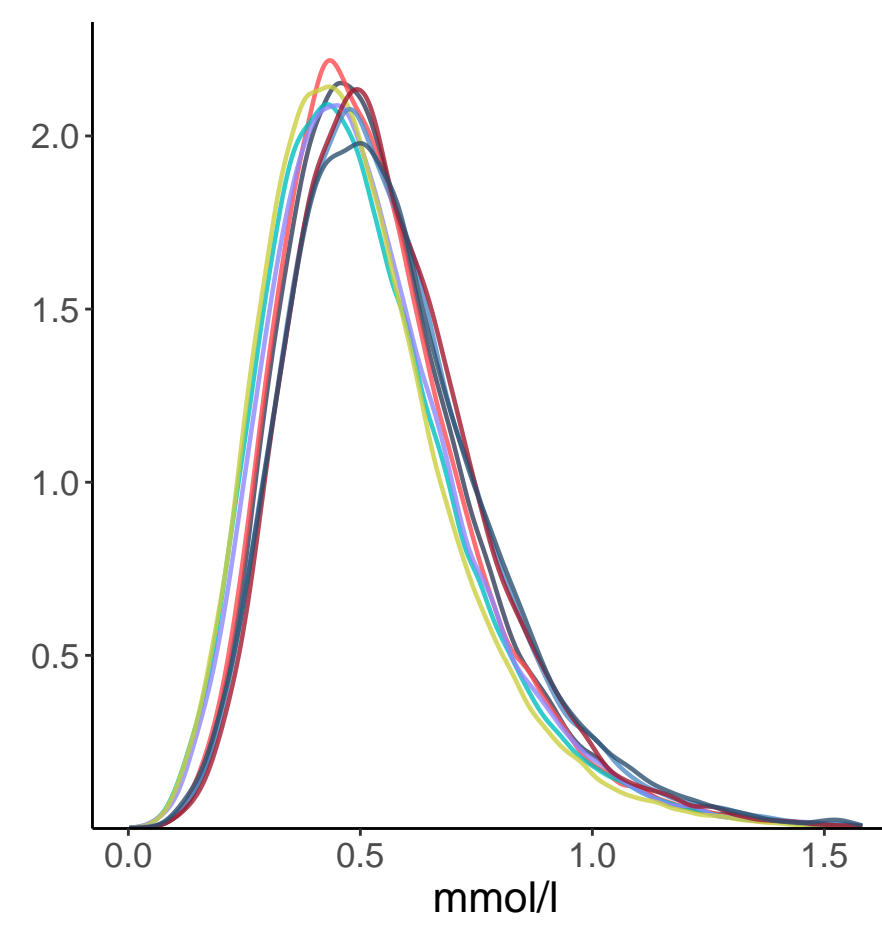
## Unsaturation

Spectrometer



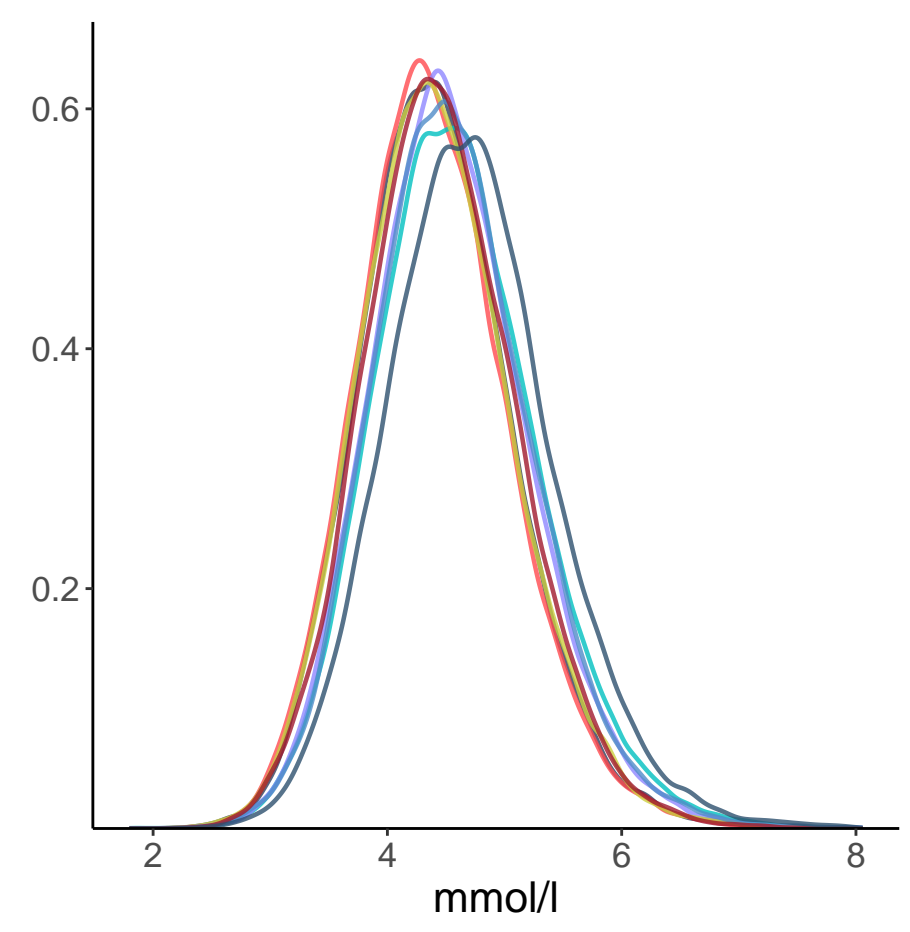
## Omega\_3

Spectrometer



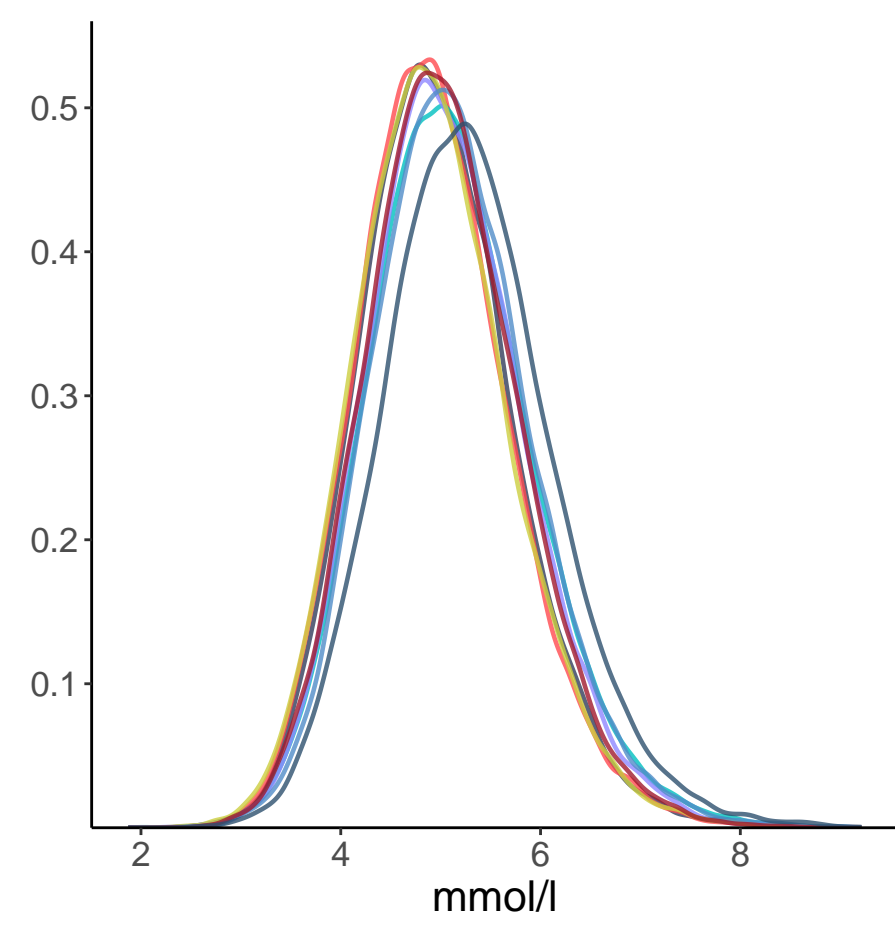
## Omega\_6

Spectrometer



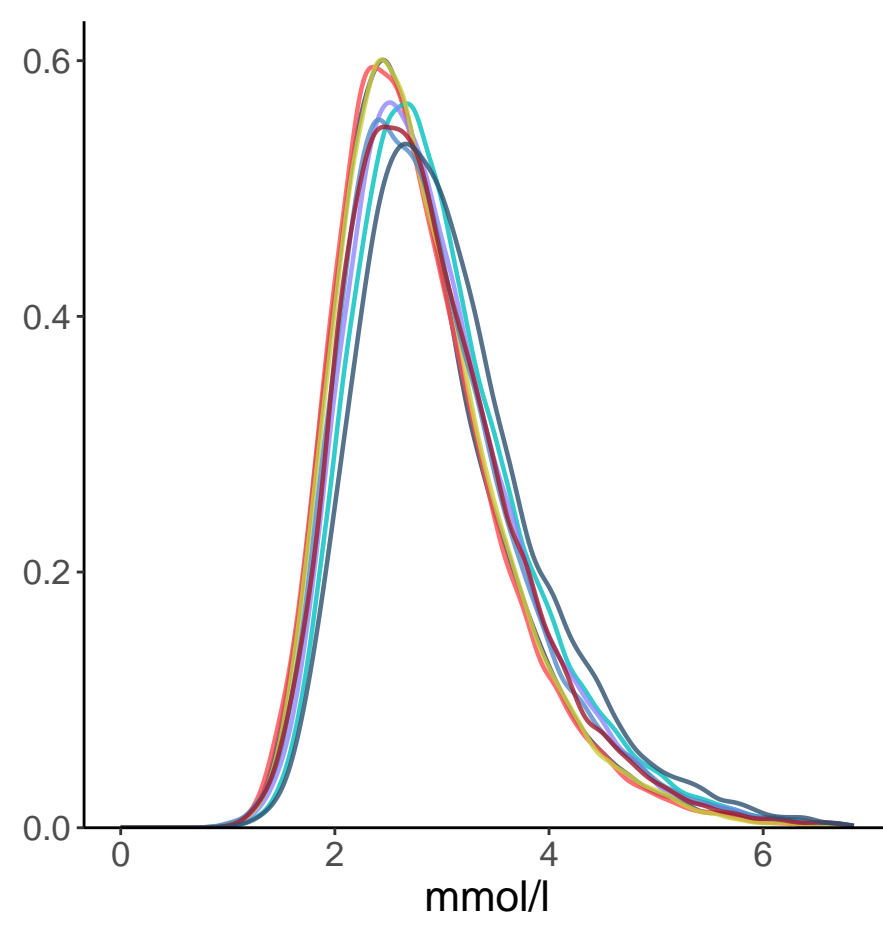
## PUFA

Spectrometer



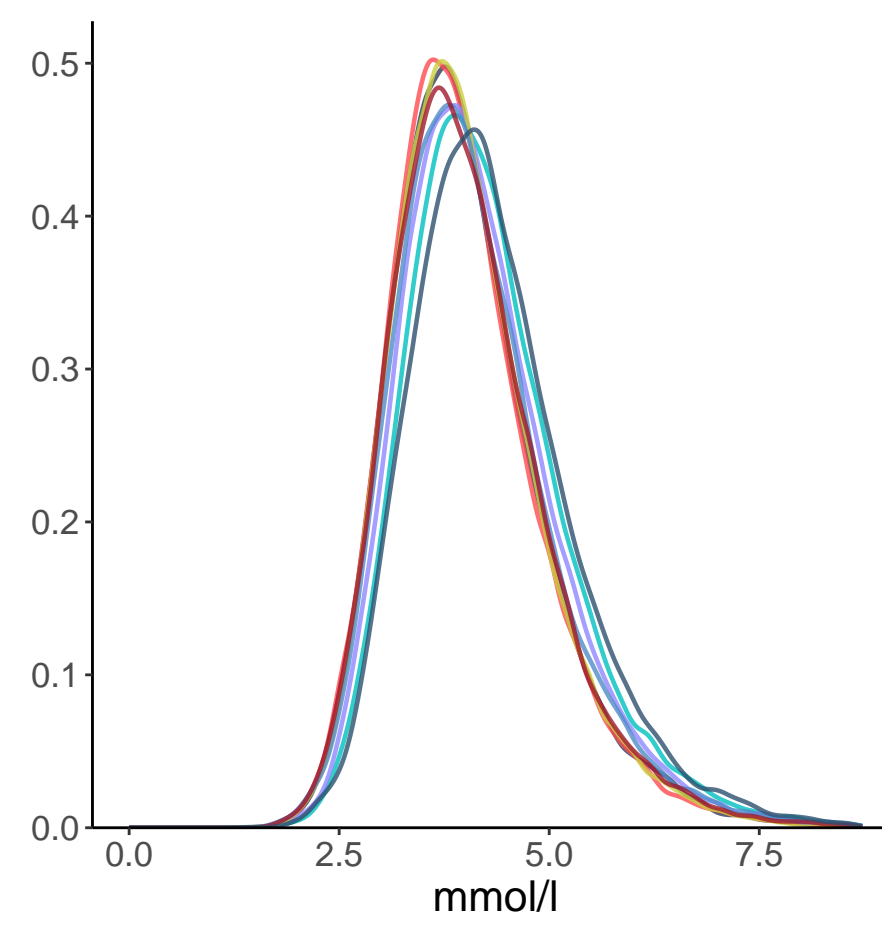
## MUFA

Spectrometer



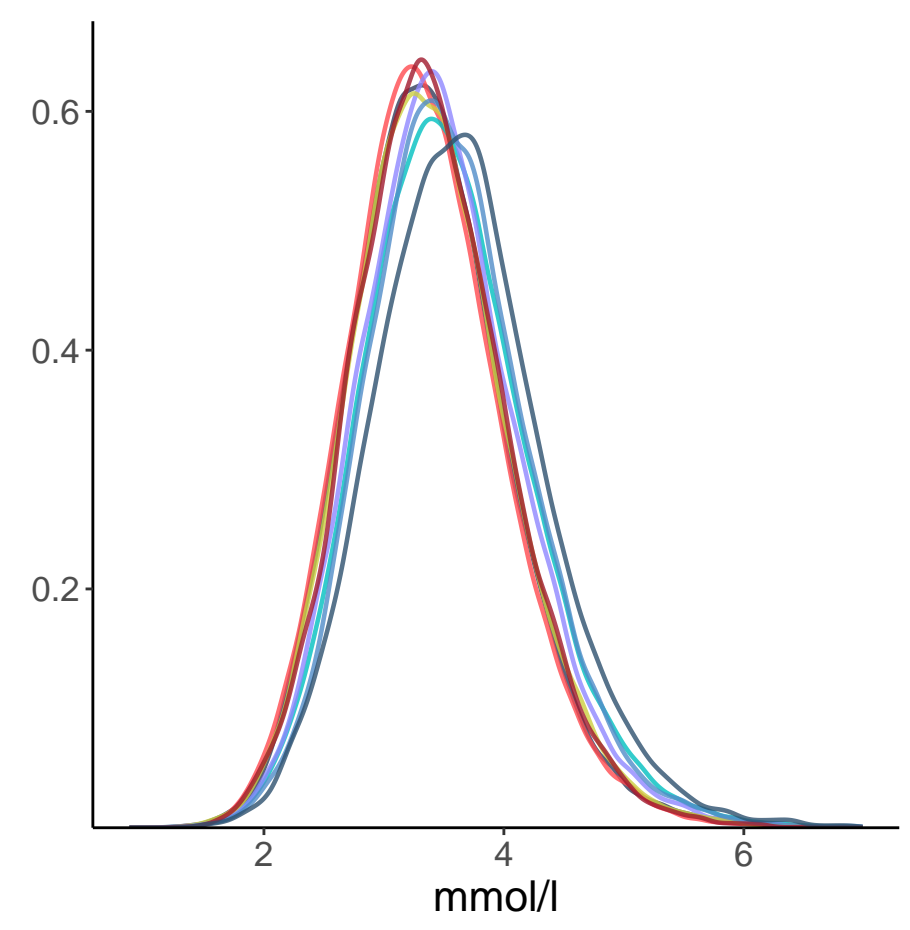
## SFA

Spectrometer



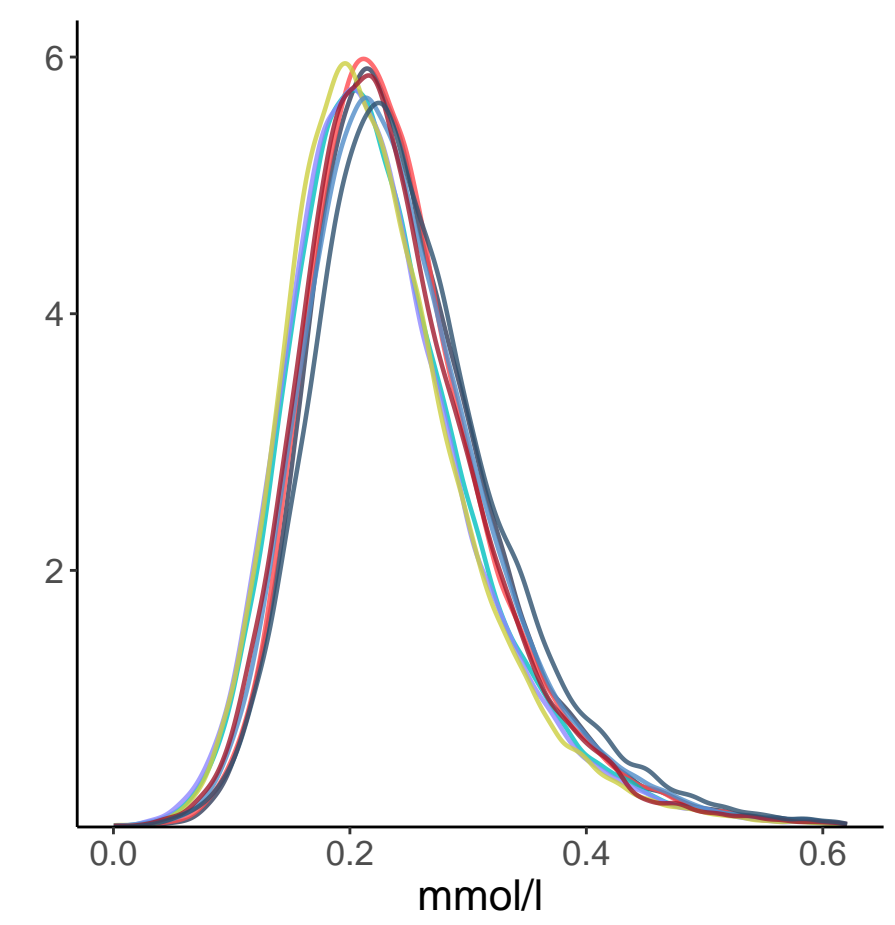
## LA

Spectrometer



## DHA

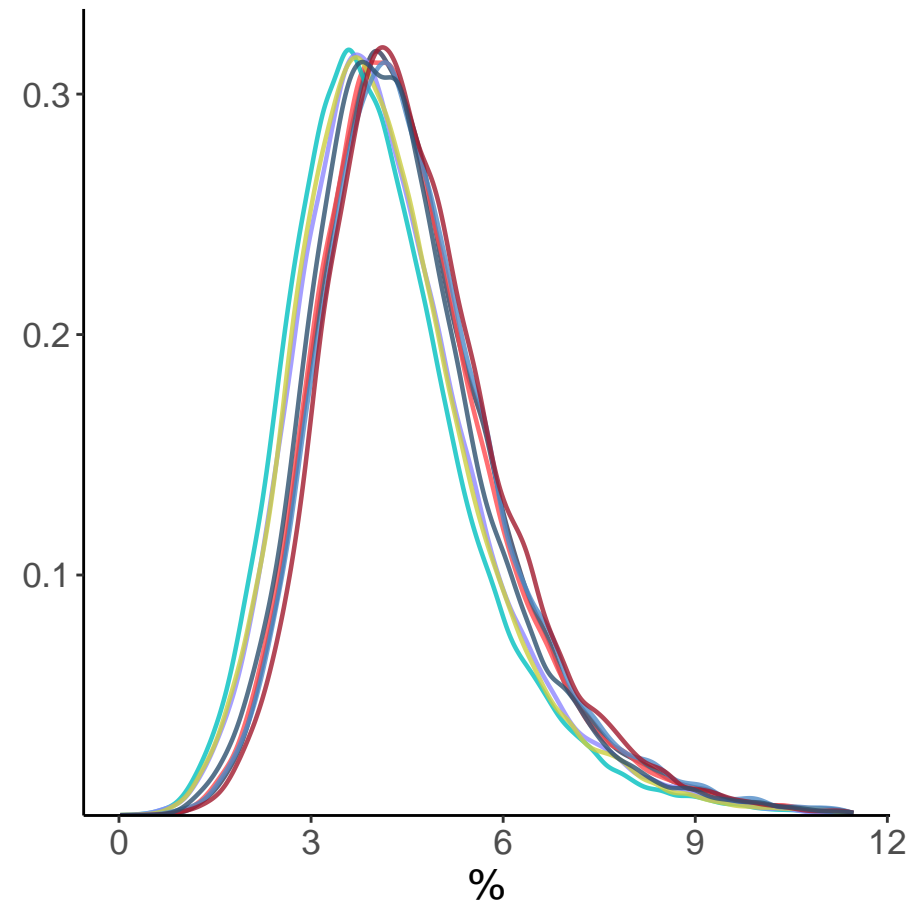
Spectrometer



# Fatty acid ratios

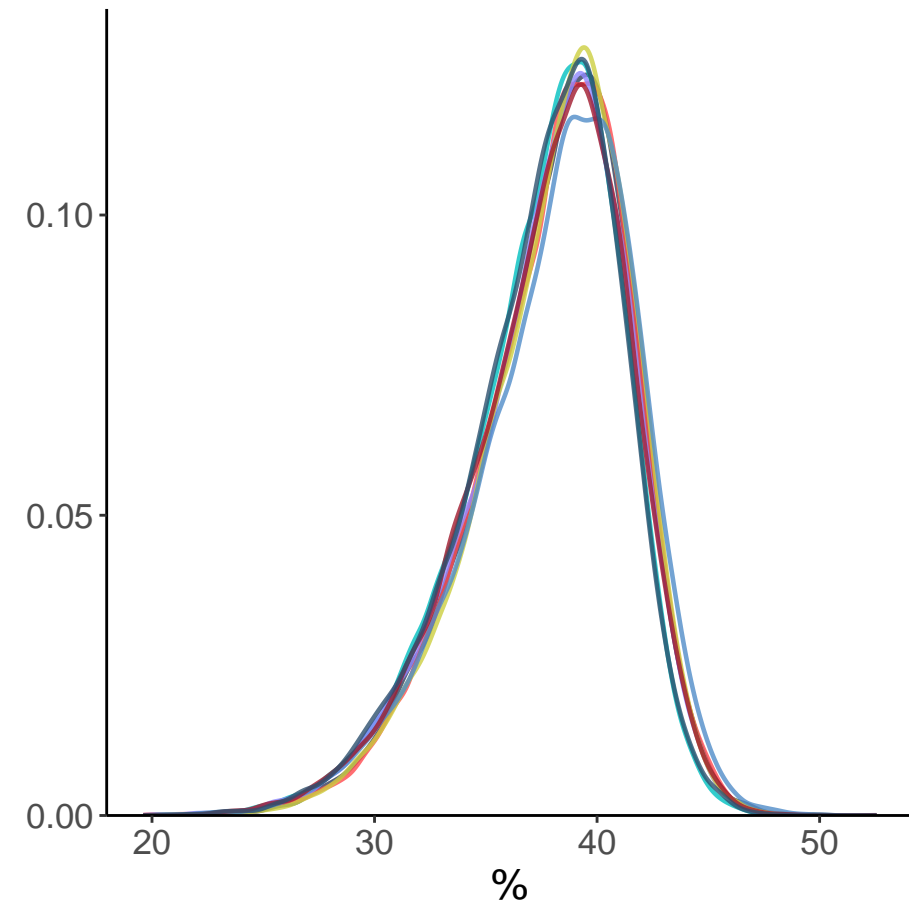
## Omega\_3\_pct

Spectrometer



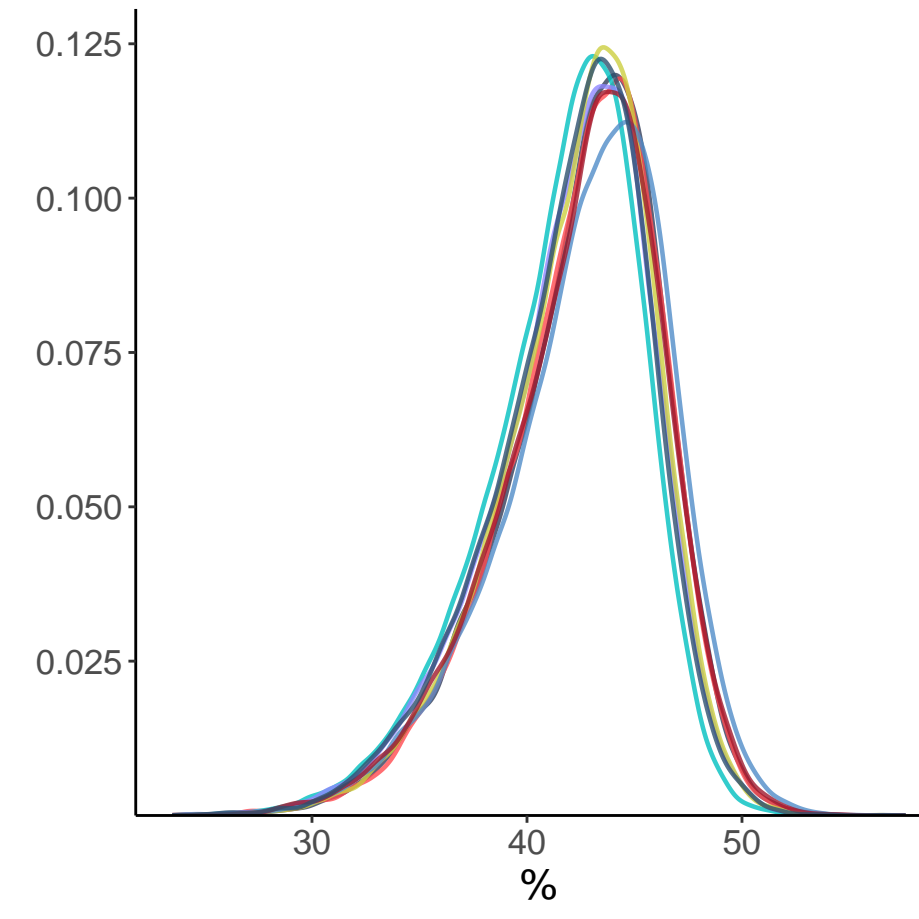
## Omega\_6\_pct

Spectrometer



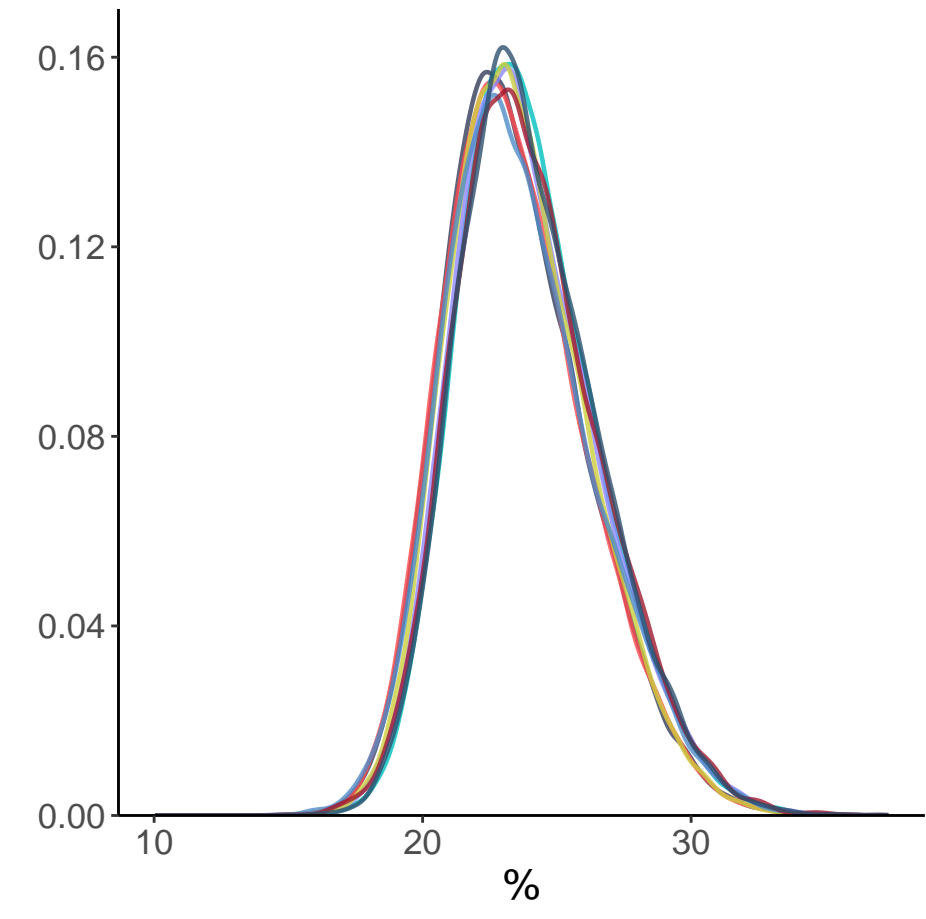
## PUFA\_pct

Spectrometer



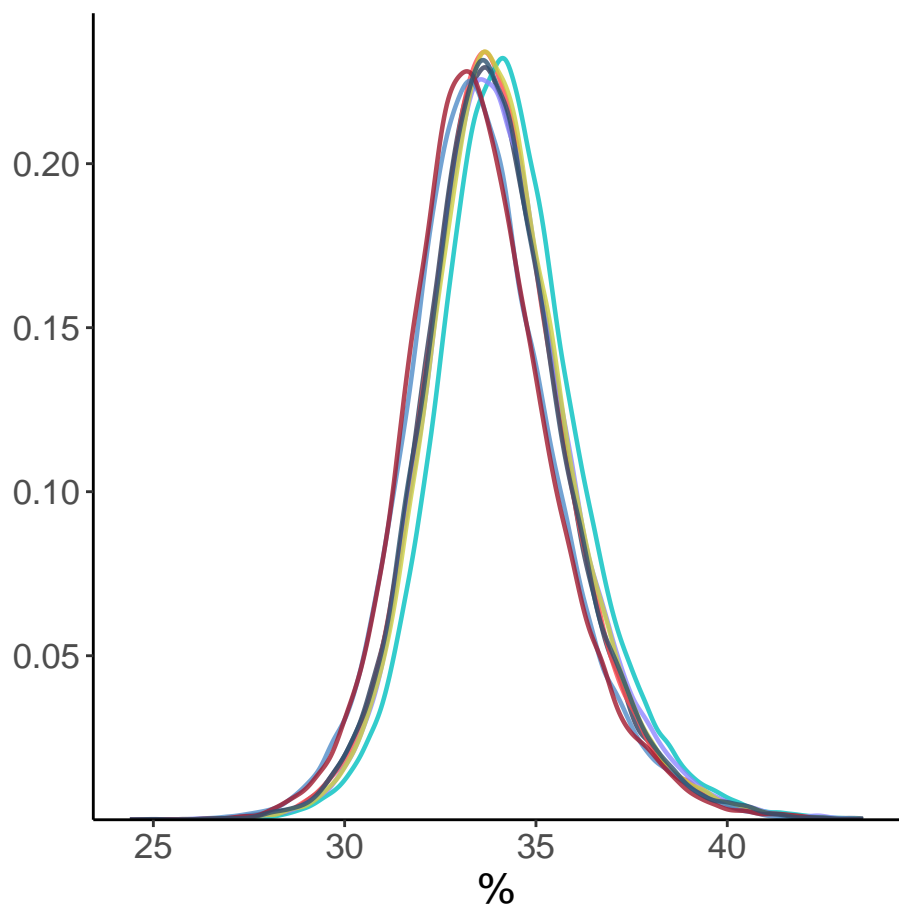
## MUFA\_pct

Spectrometer



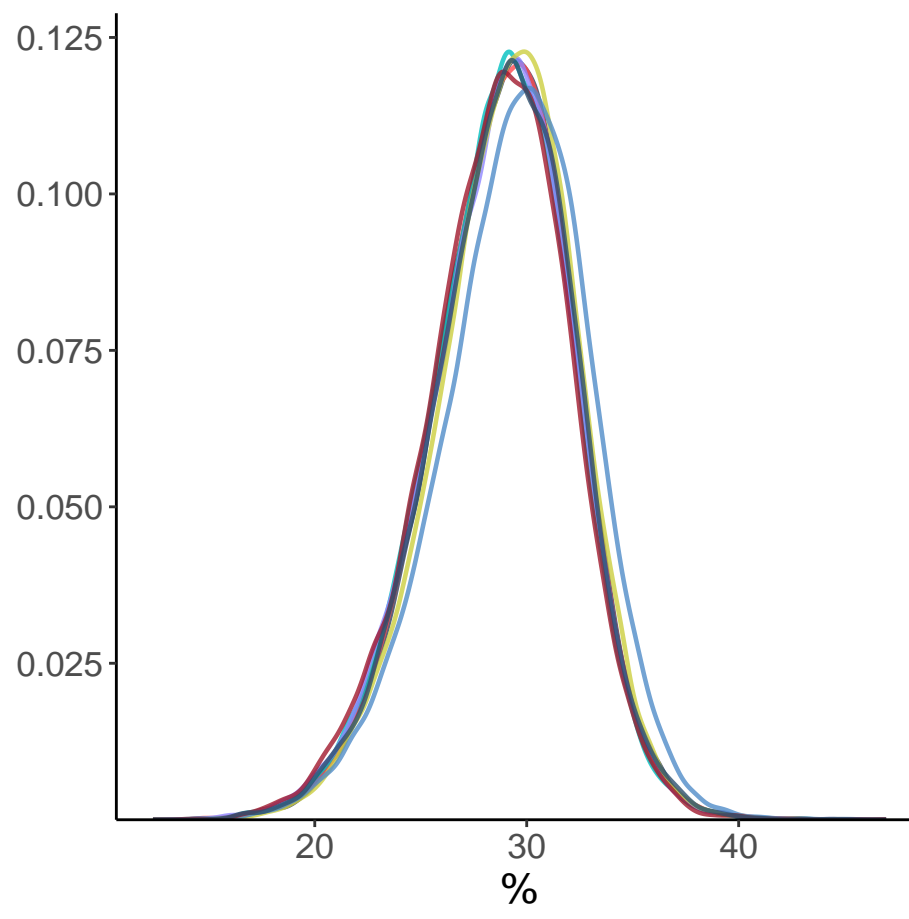
## SFA\_pct

Spectrometer



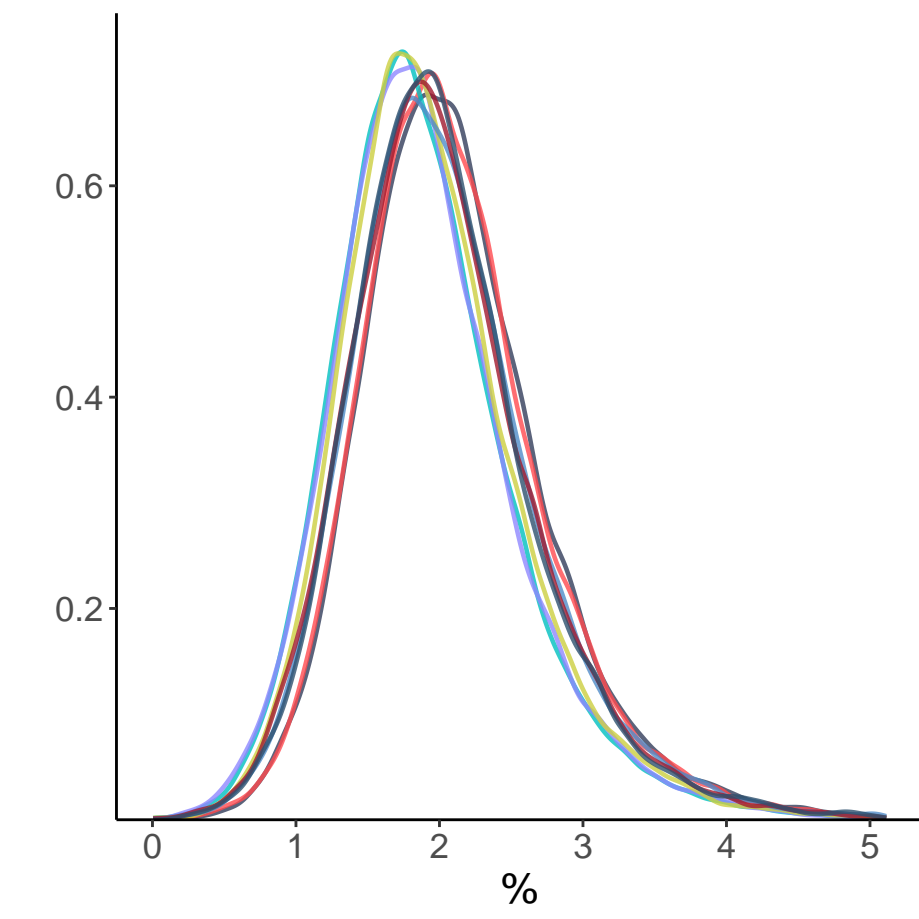
## LA\_pct

Spectrometer



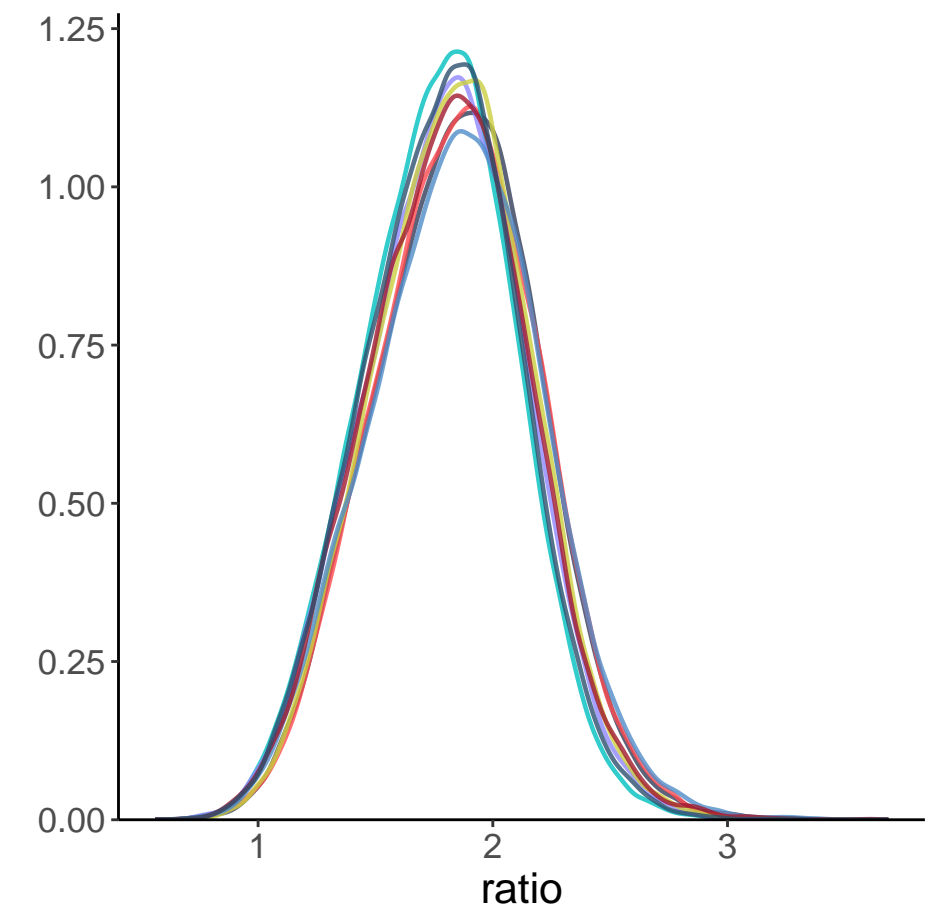
## DHA\_pct

Spectrometer



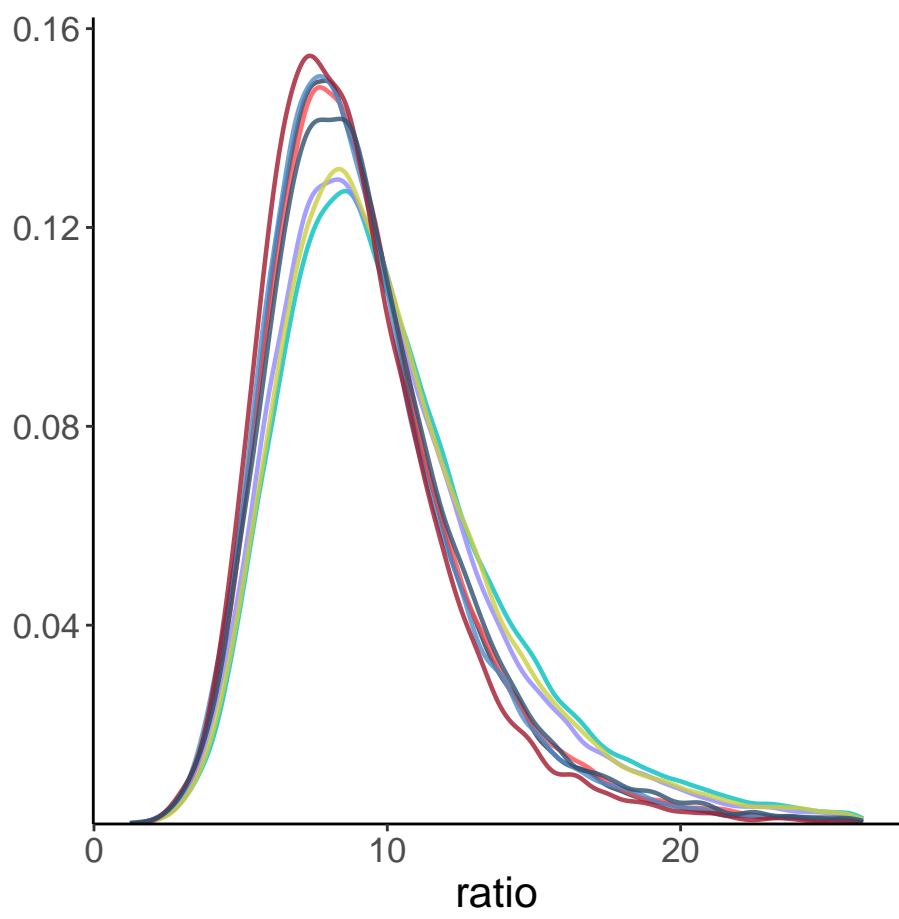
## PUFA\_by\_MUFA

Spectrometer



## Omega\_6\_by\_Omega\_3

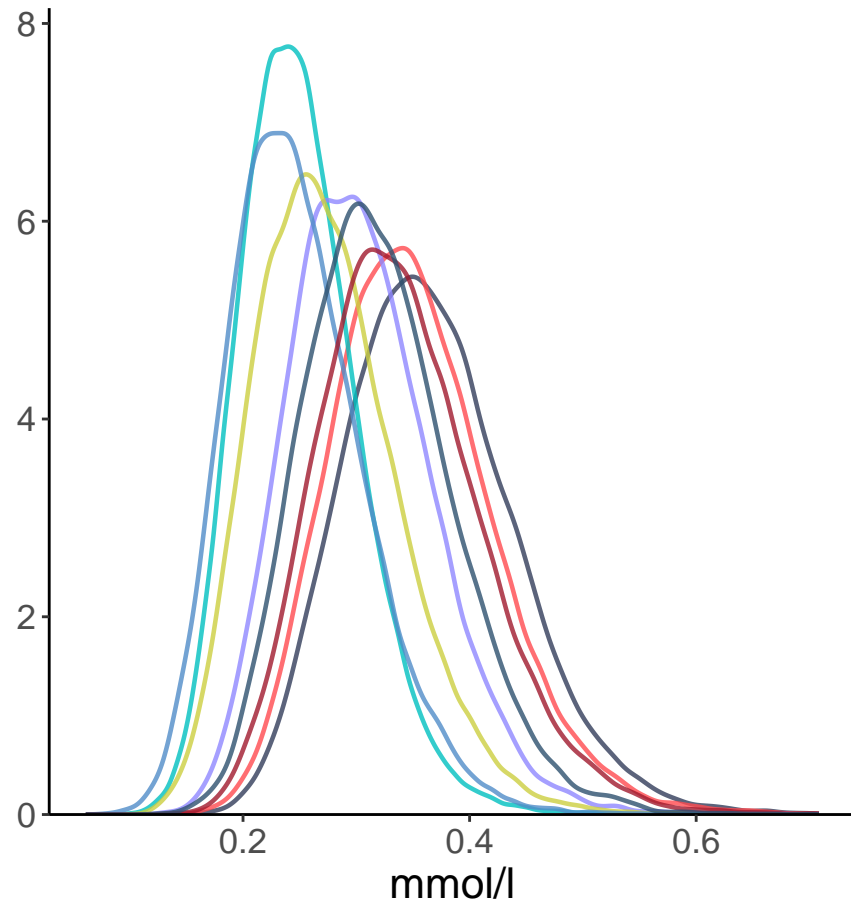
Spectrometer



# Amino acids

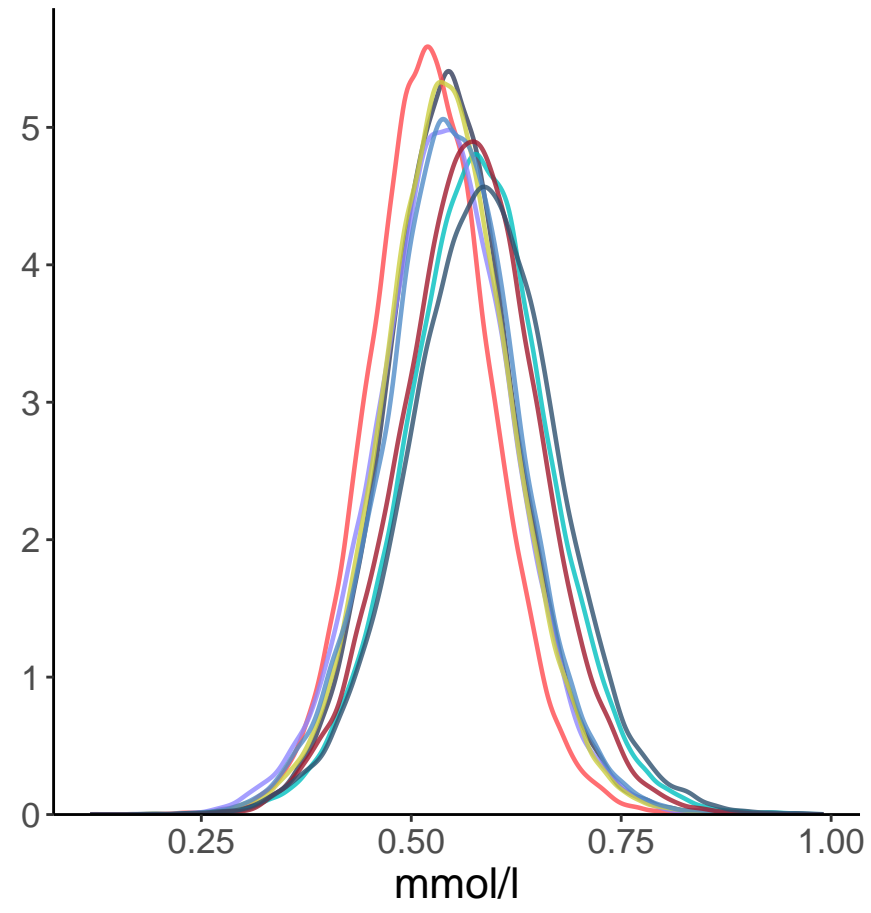
## Ala

Spectrometer



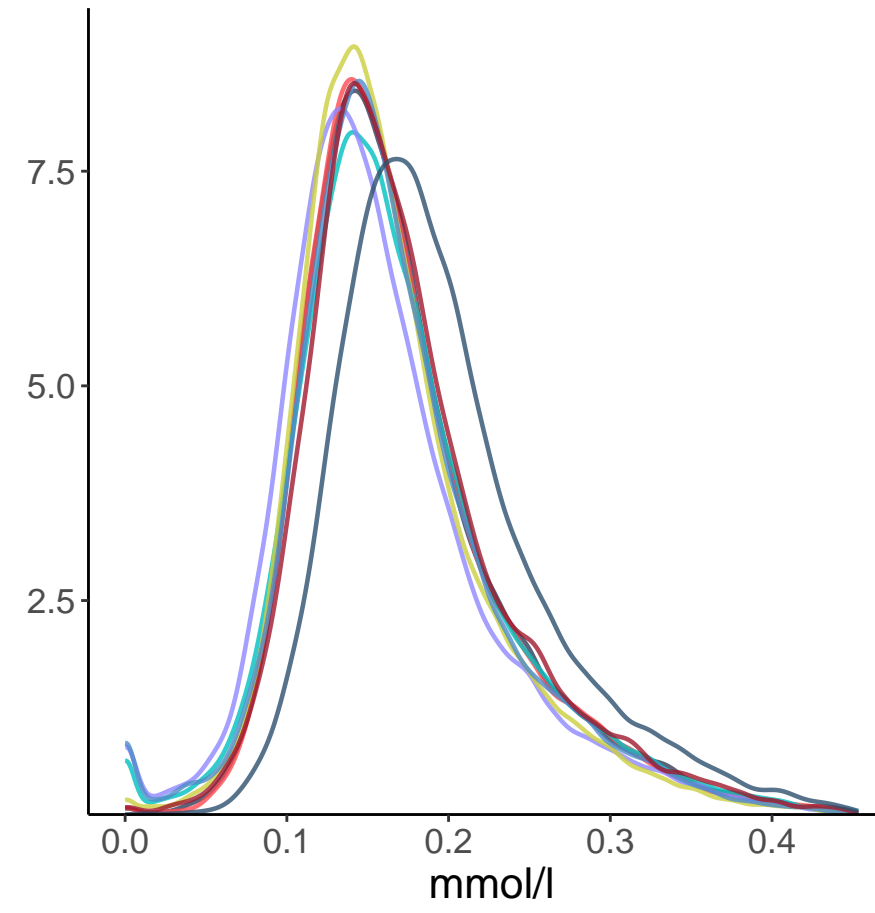
## Gln

Spectrometer



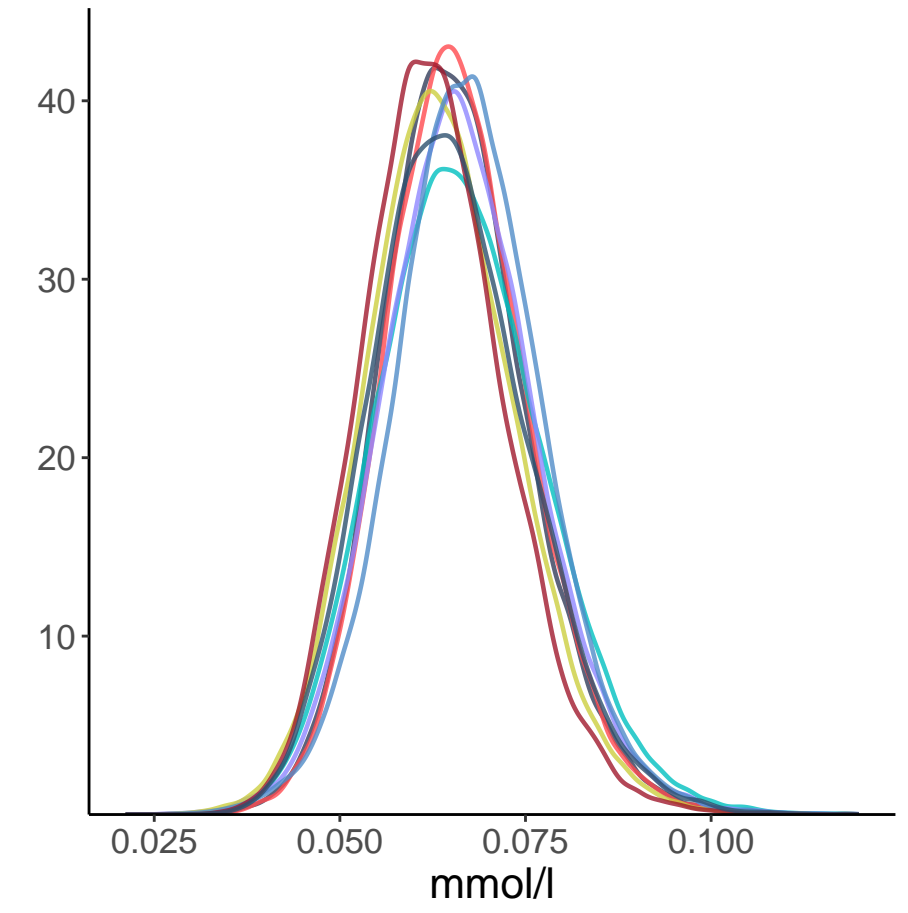
## Gly

Spectrometer



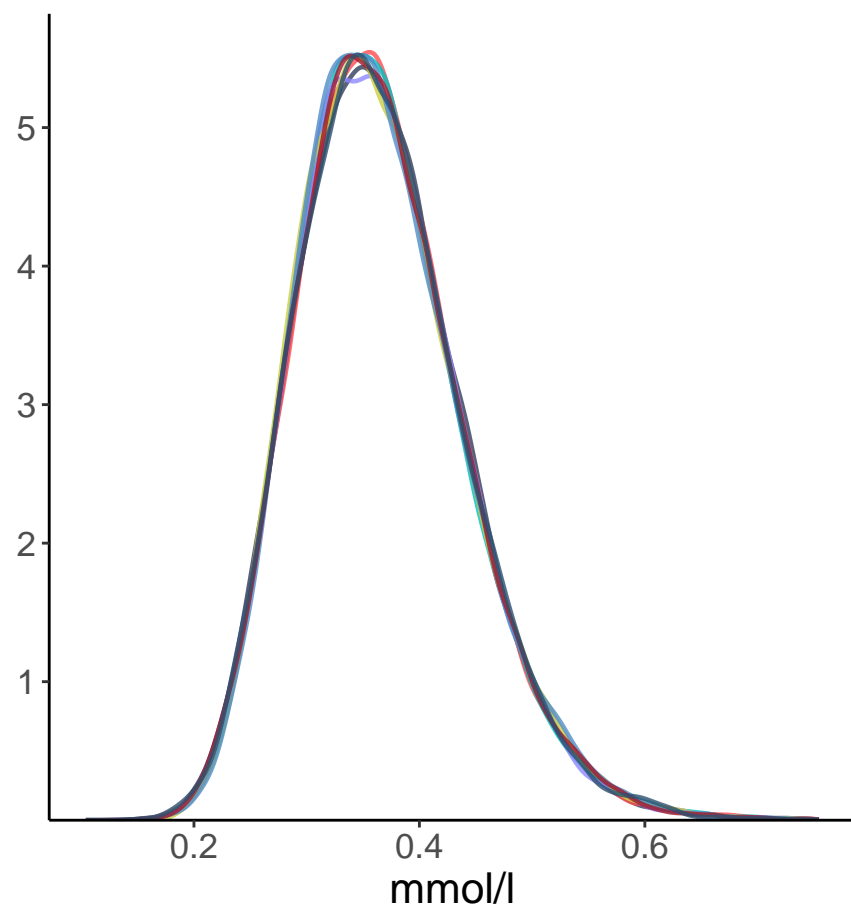
## His

Spectrometer

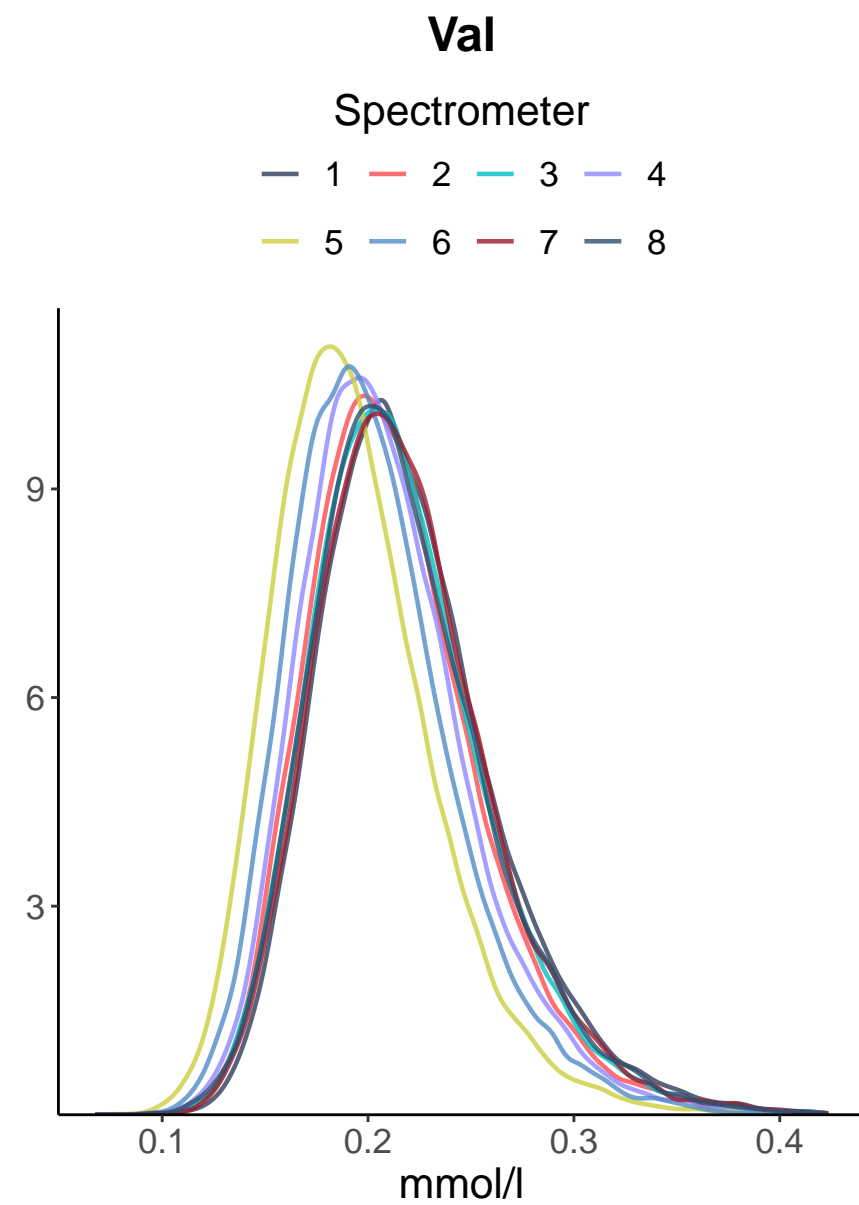
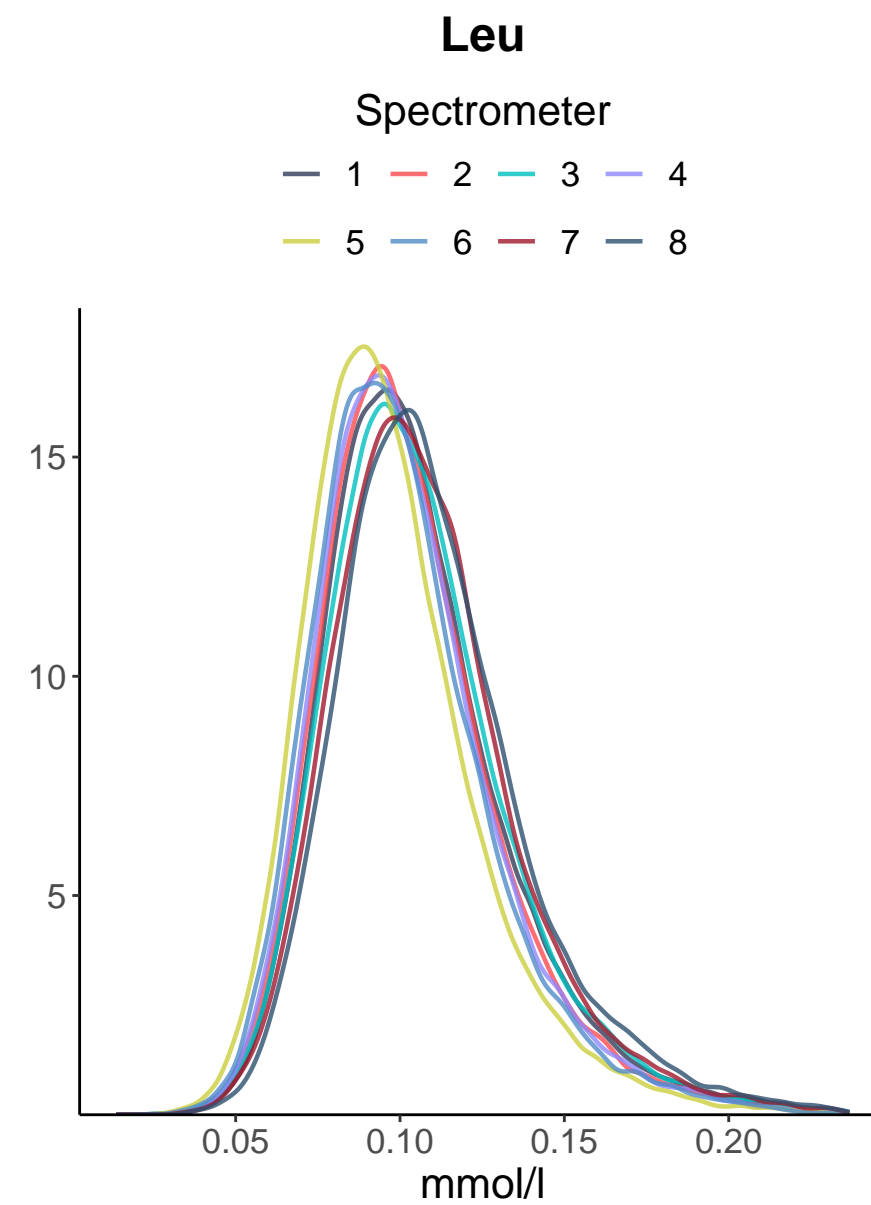
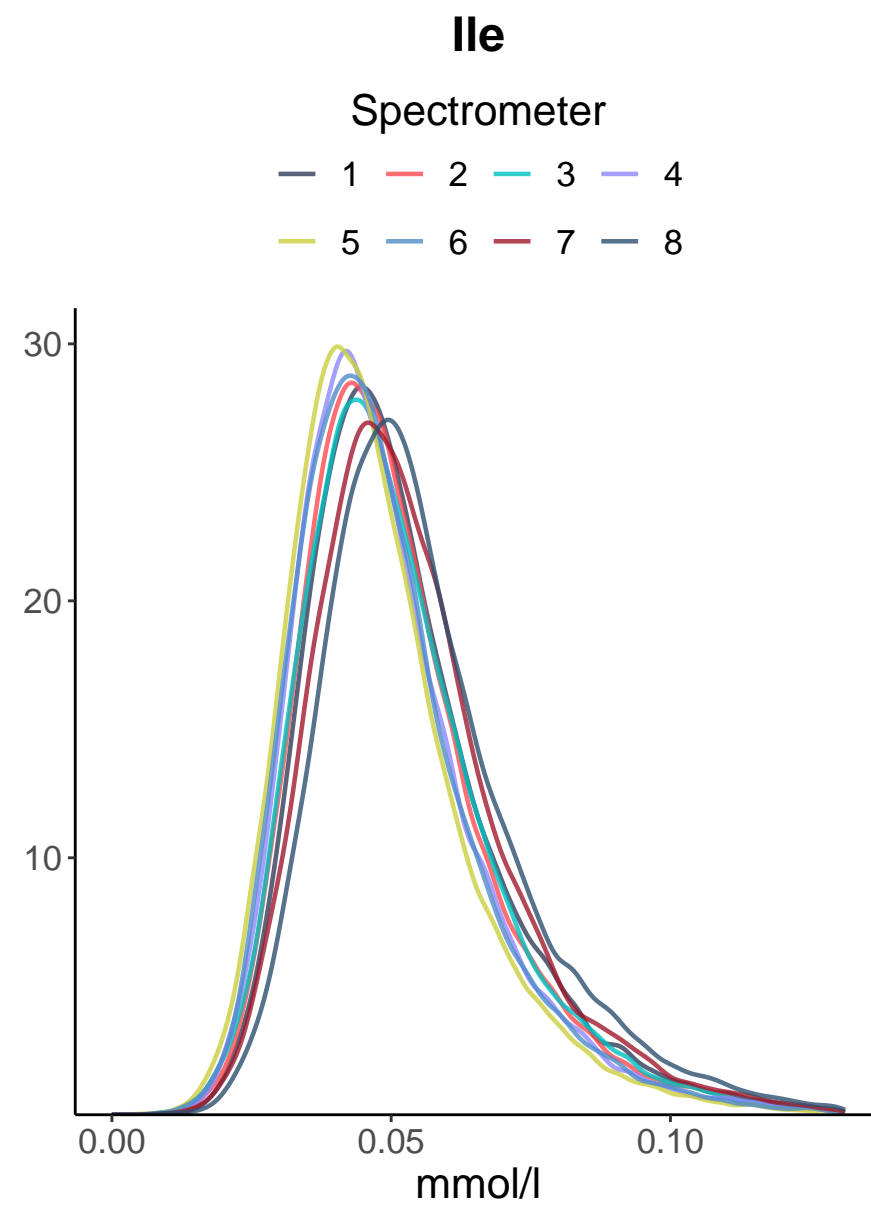
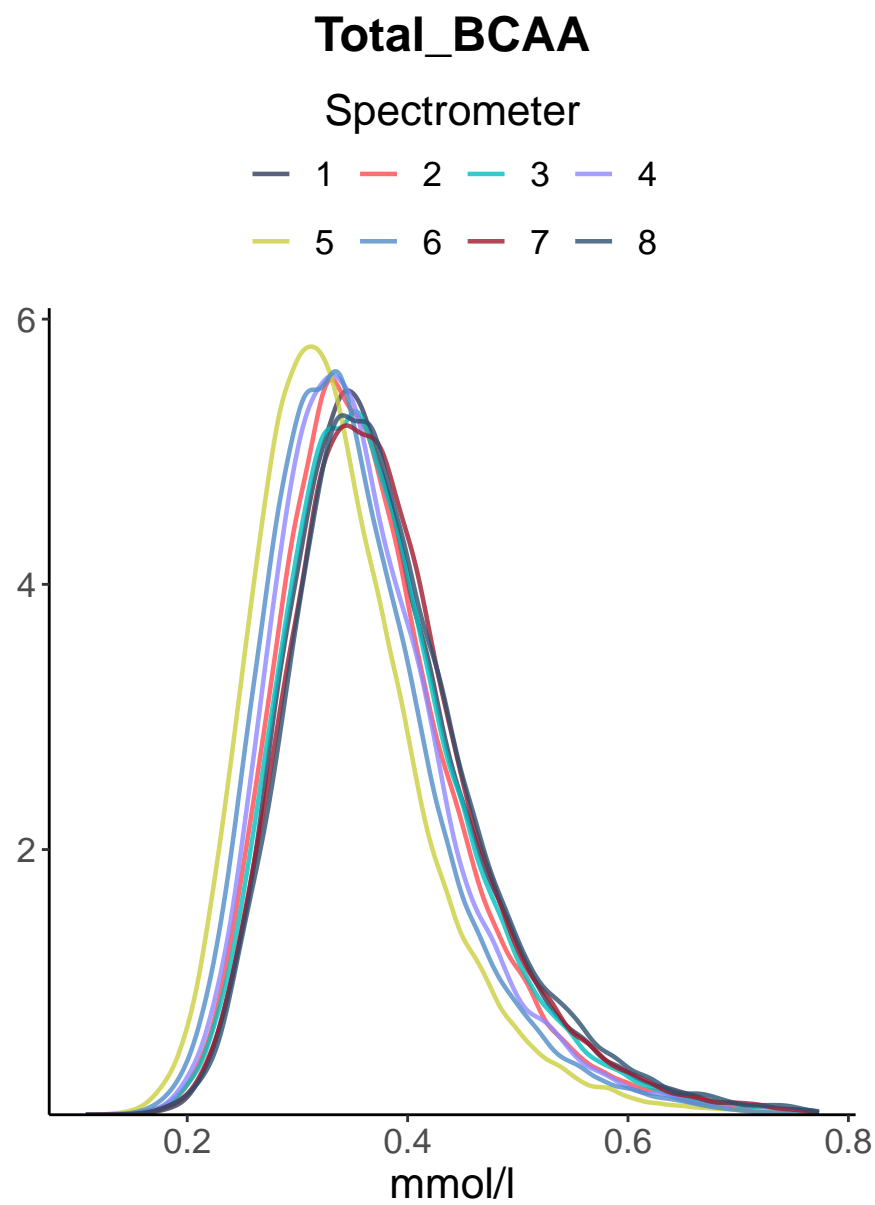


## Ala\_corrected

Spectrometer



# Branched-chain amino acids

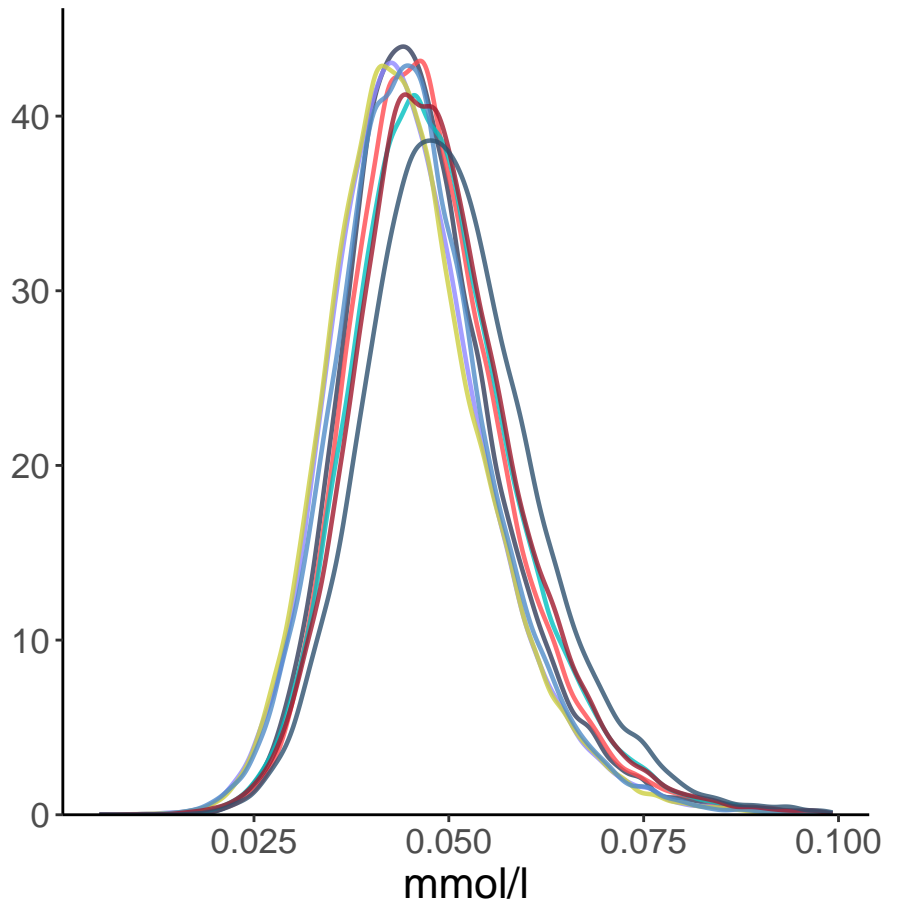


# Aromatic amino acids

## Phe

Spectrometer

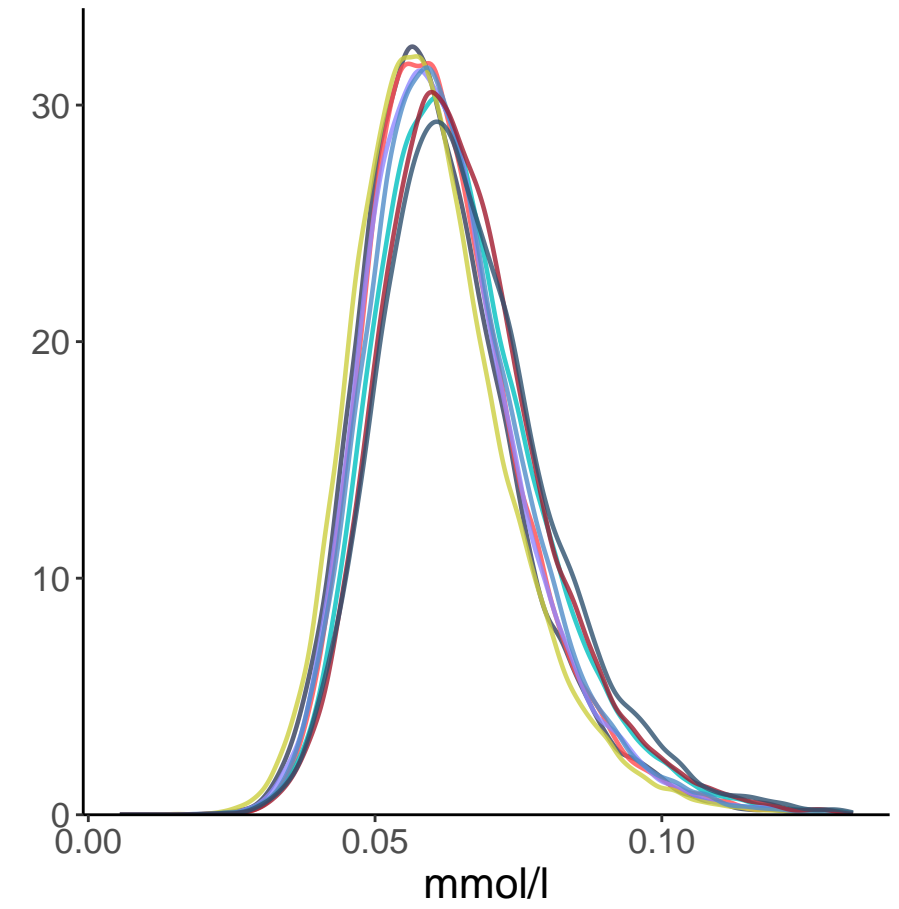
- 1 2 3 4
- 5 6 7 8



## Tyr

Spectrometer

- 1 2 3 4
- 5 6 7 8

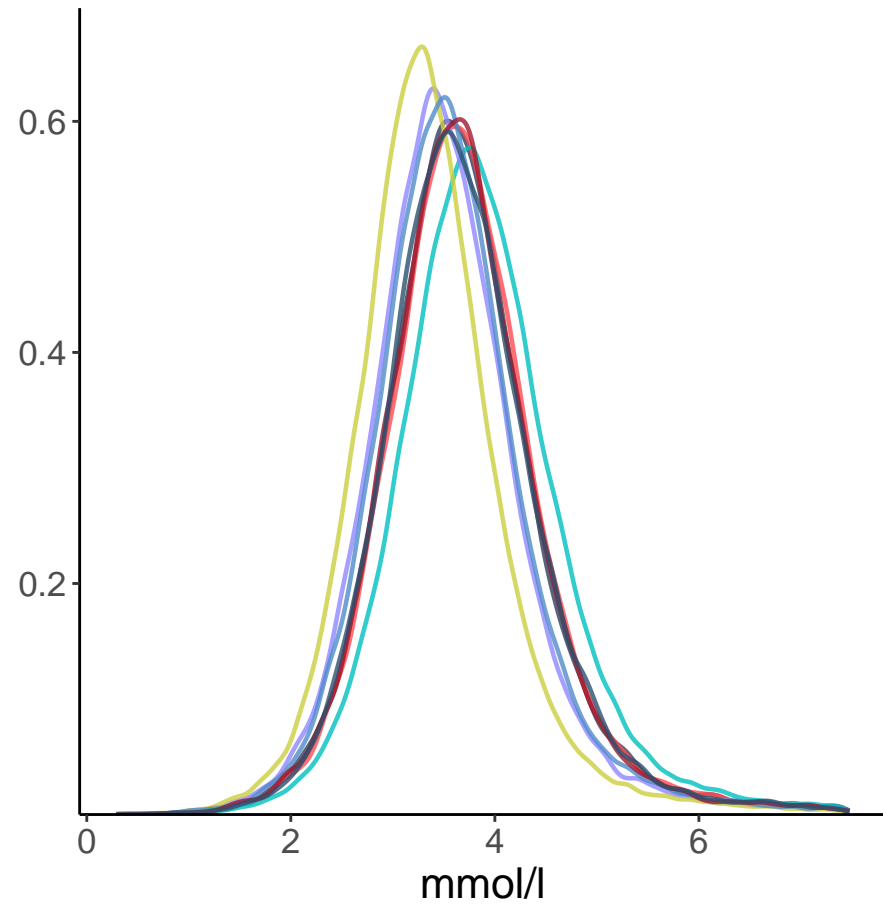




# Glycolysis related metabolites

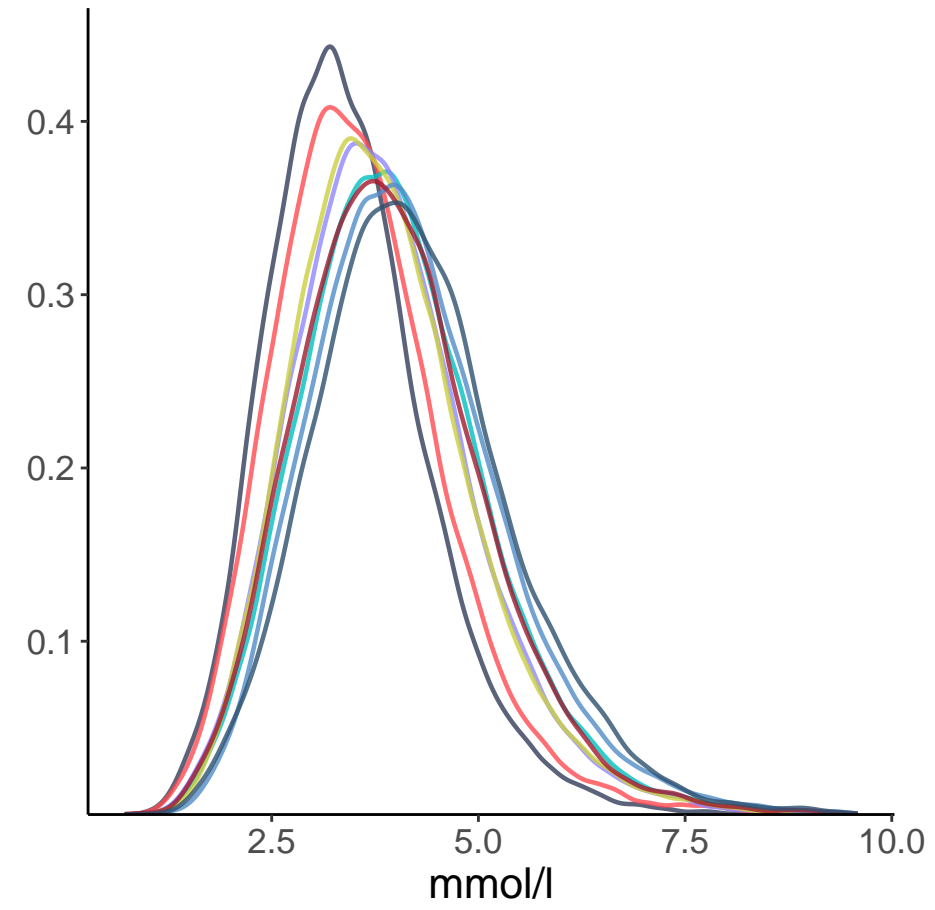
## Glucose

Spectrometer



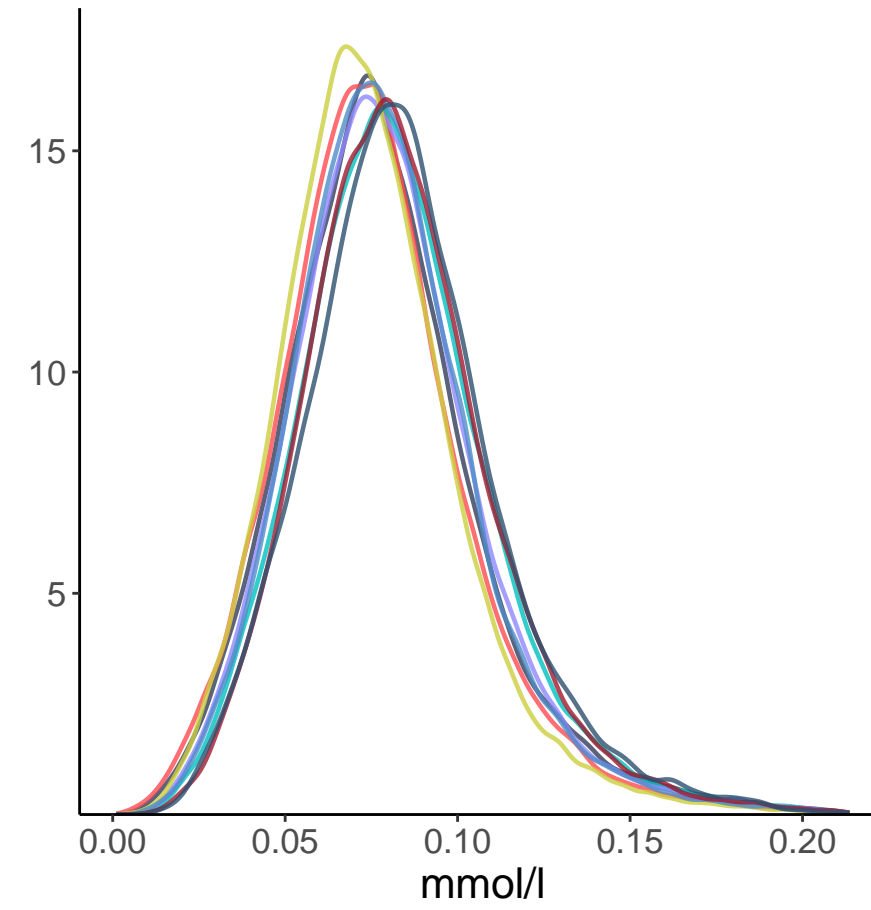
## Lactate

Spectrometer



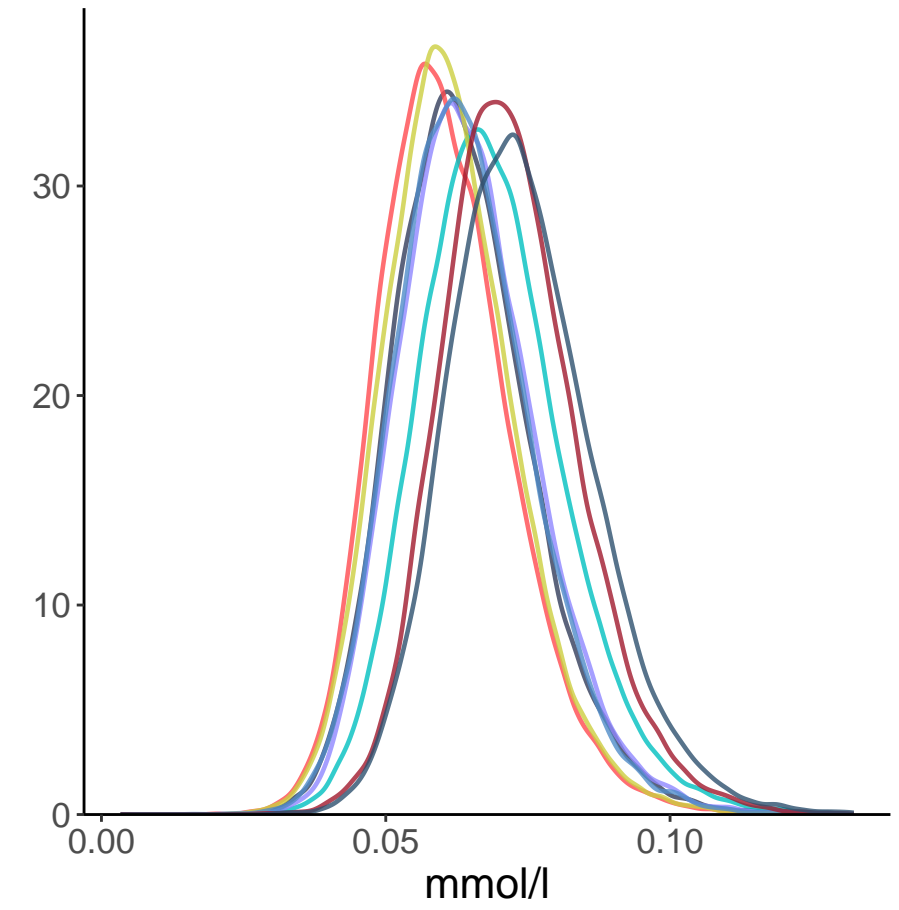
## Pyruvate

Spectrometer



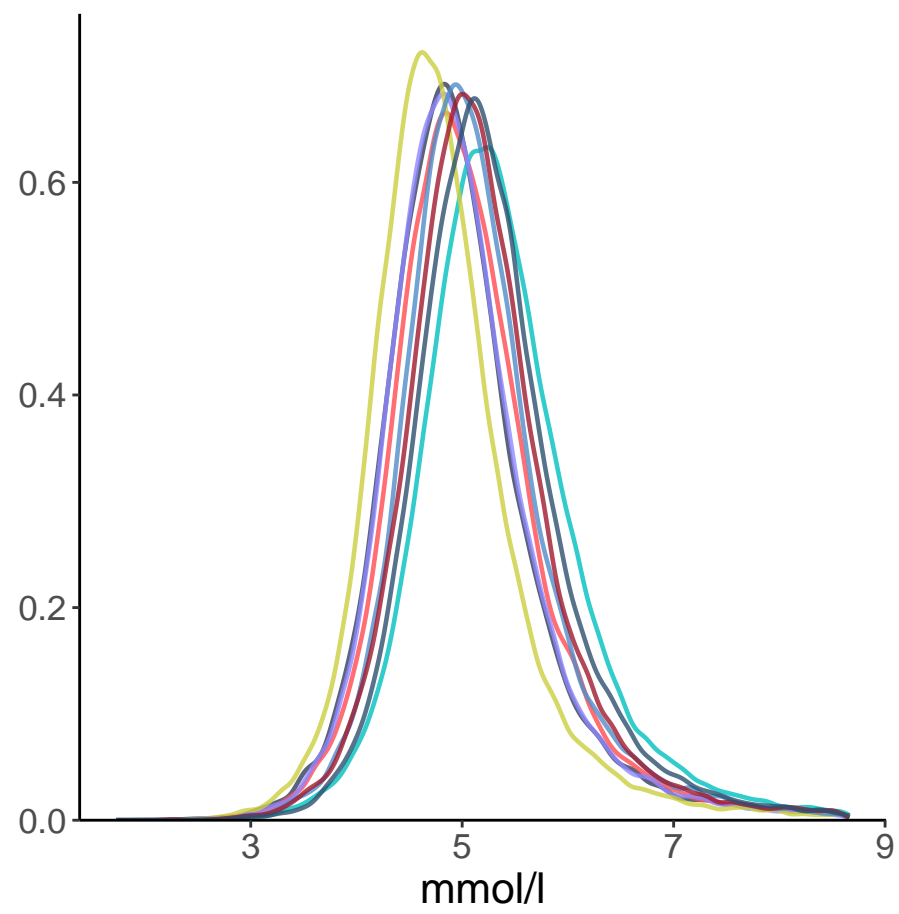
## Citrate

Spectrometer



## Glucose\_Lactate

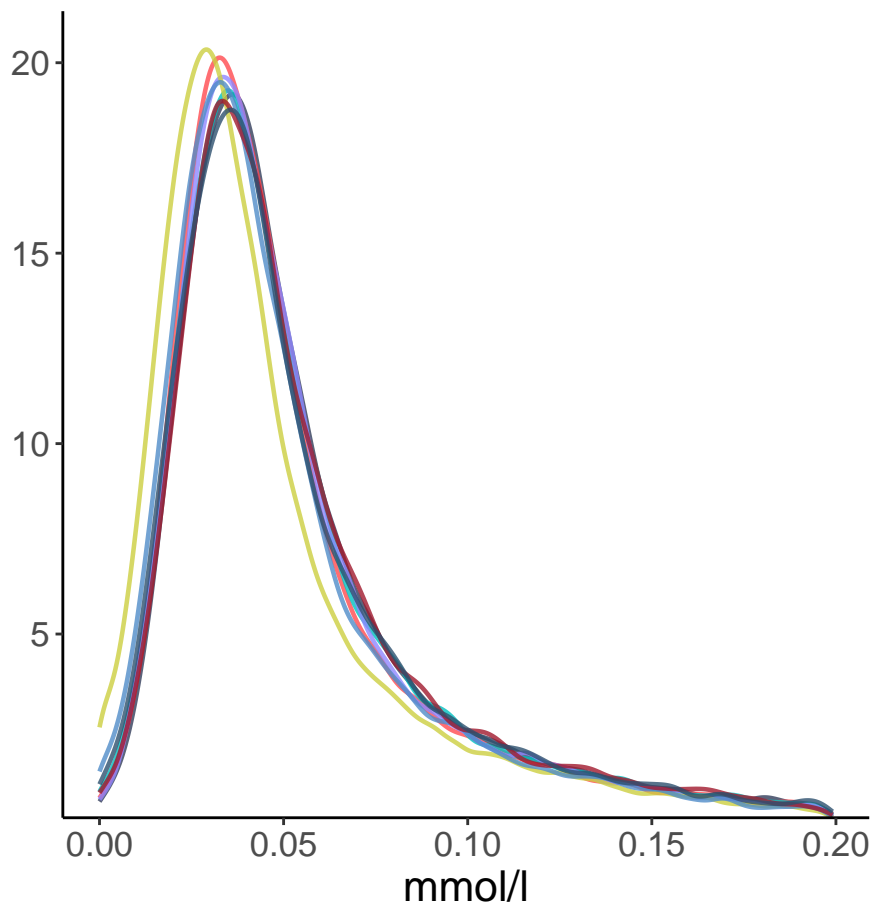
Spectrometer



# Ketone bodies

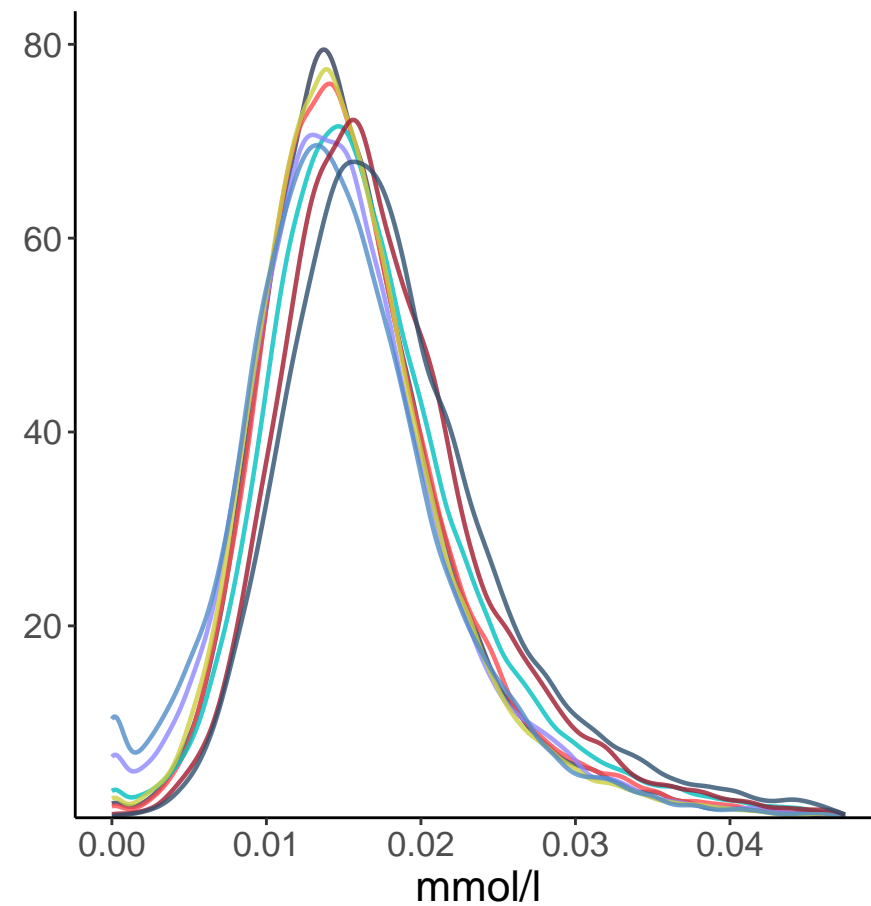
## bOHbutyrate

Spectrometer



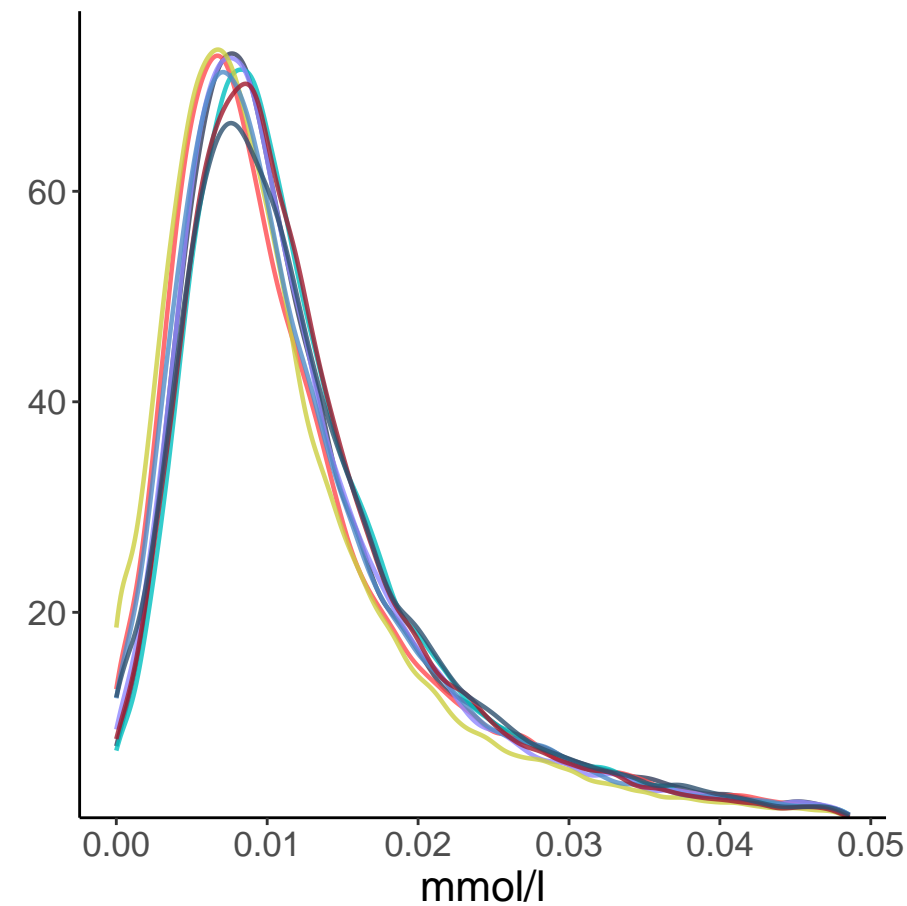
## Acetate

Spectrometer



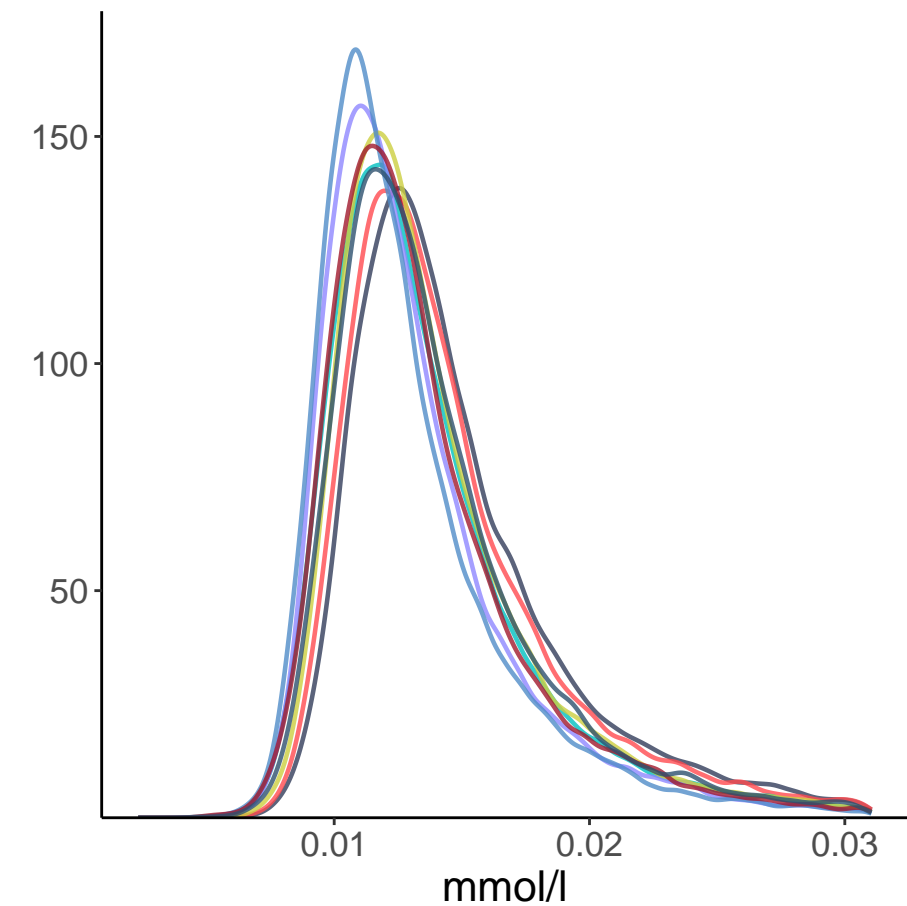
## Acetoacetate

Spectrometer



## Acetone

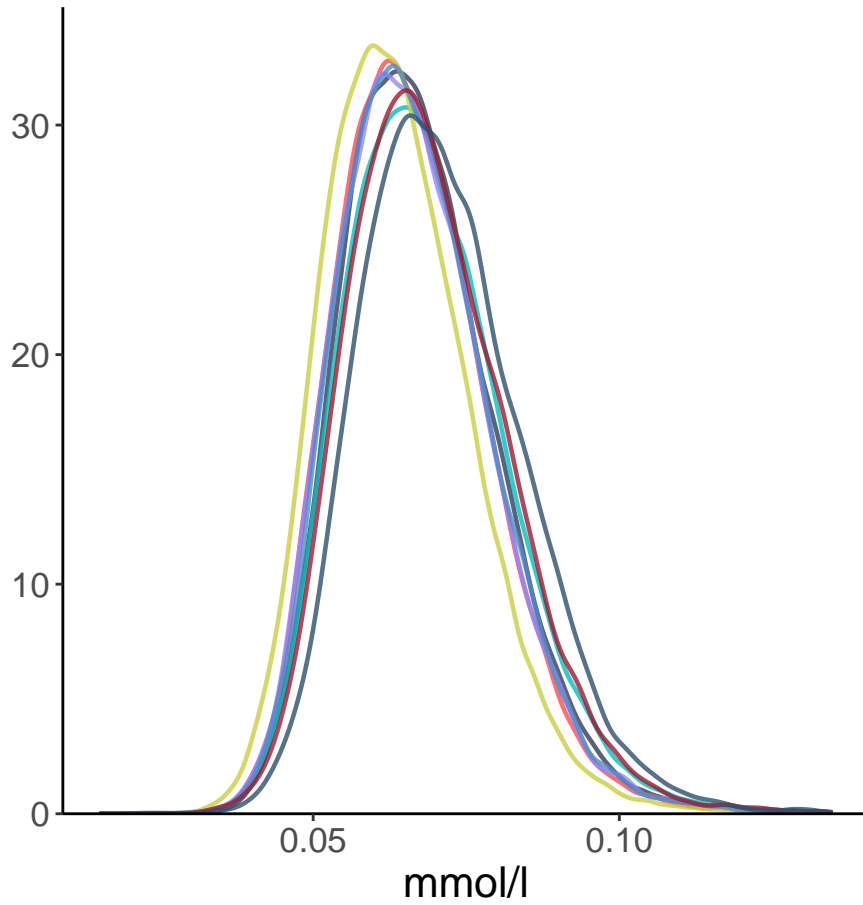
Spectrometer



# Fluid balance

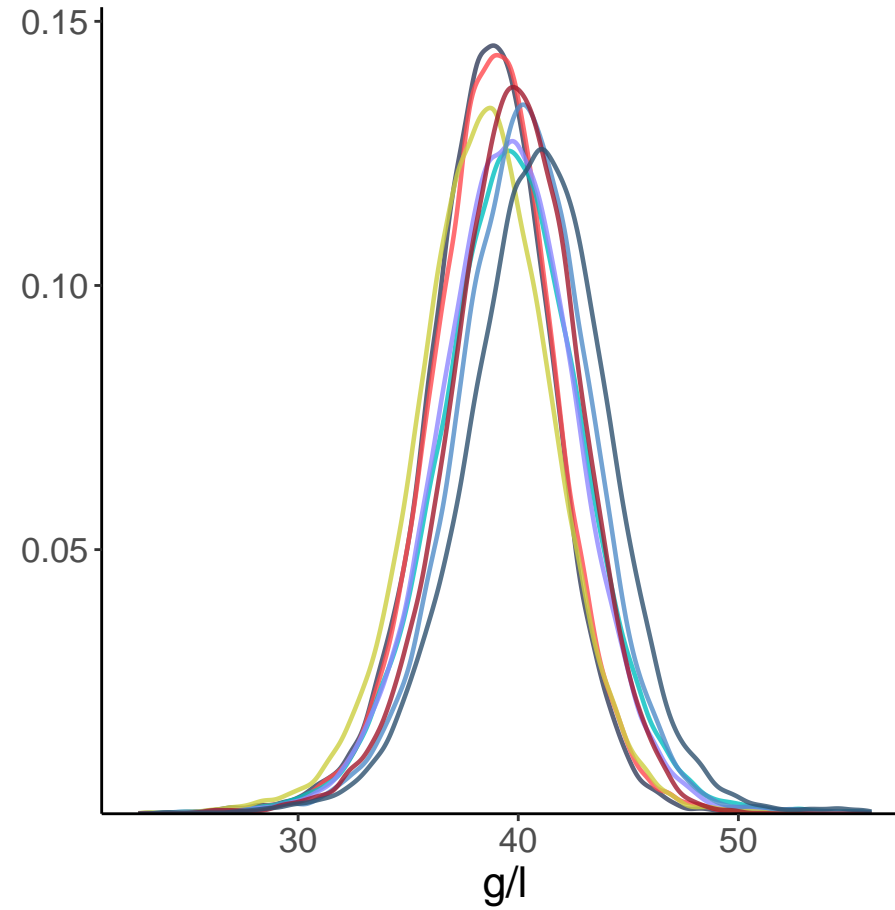
## Creatinine

Spectrometer



## Albumin

Spectrometer

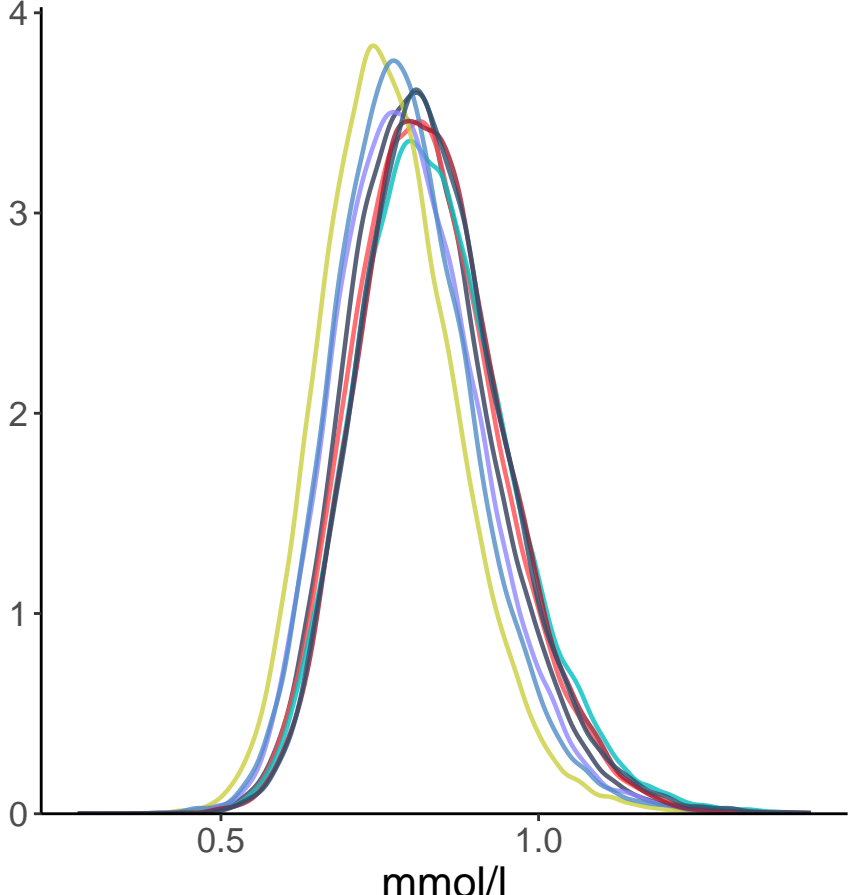


# Inflammation

## GlycA

Spectrometer

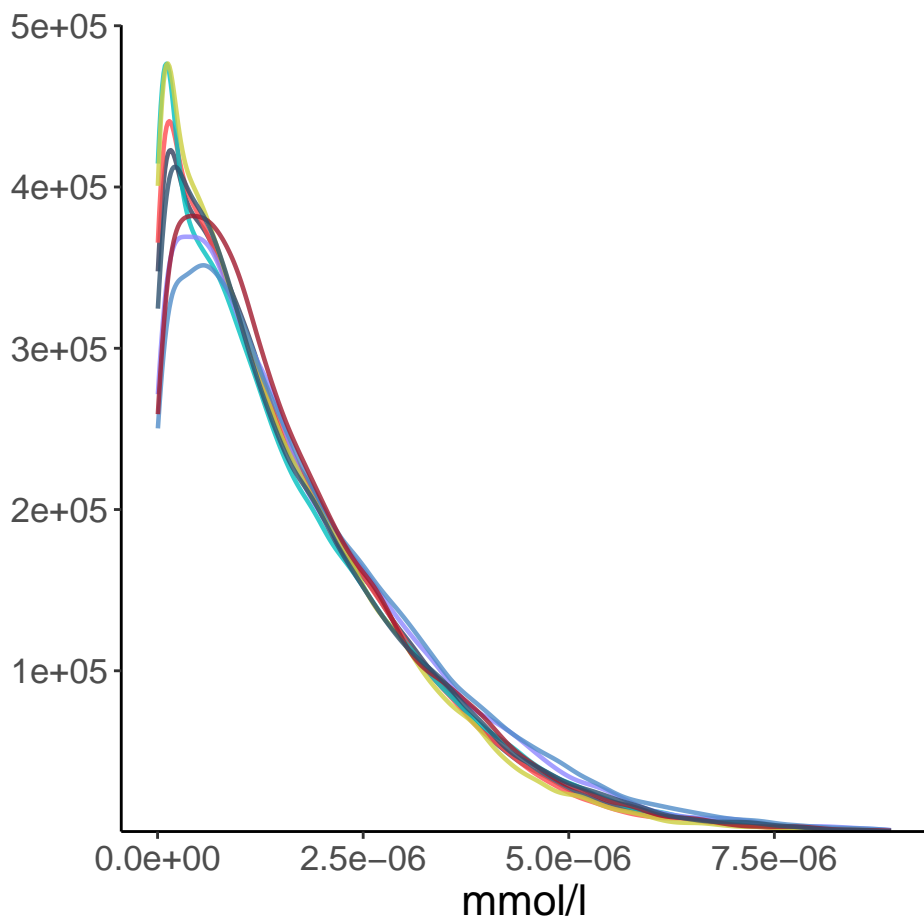
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8



# Chylomicrons and extremely large VLDL (particle diameters from 75 nm upwards)

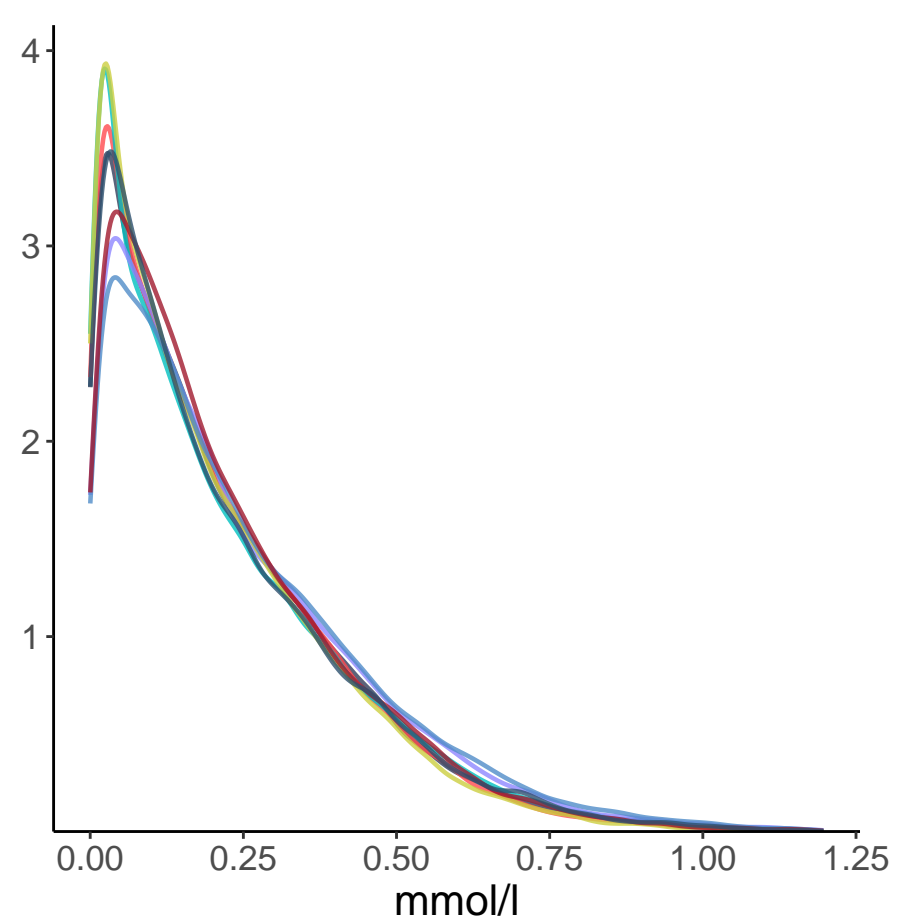
## XXL\_VLDL\_P

Spectrometer



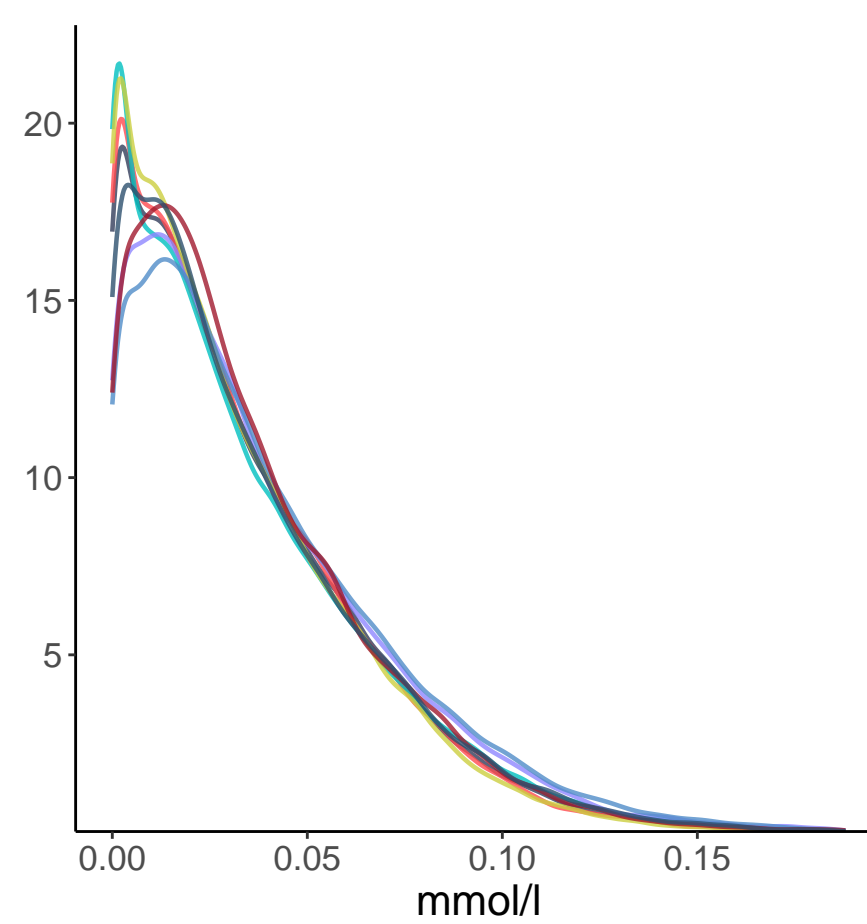
## XXL\_VLDL\_L

Spectrometer



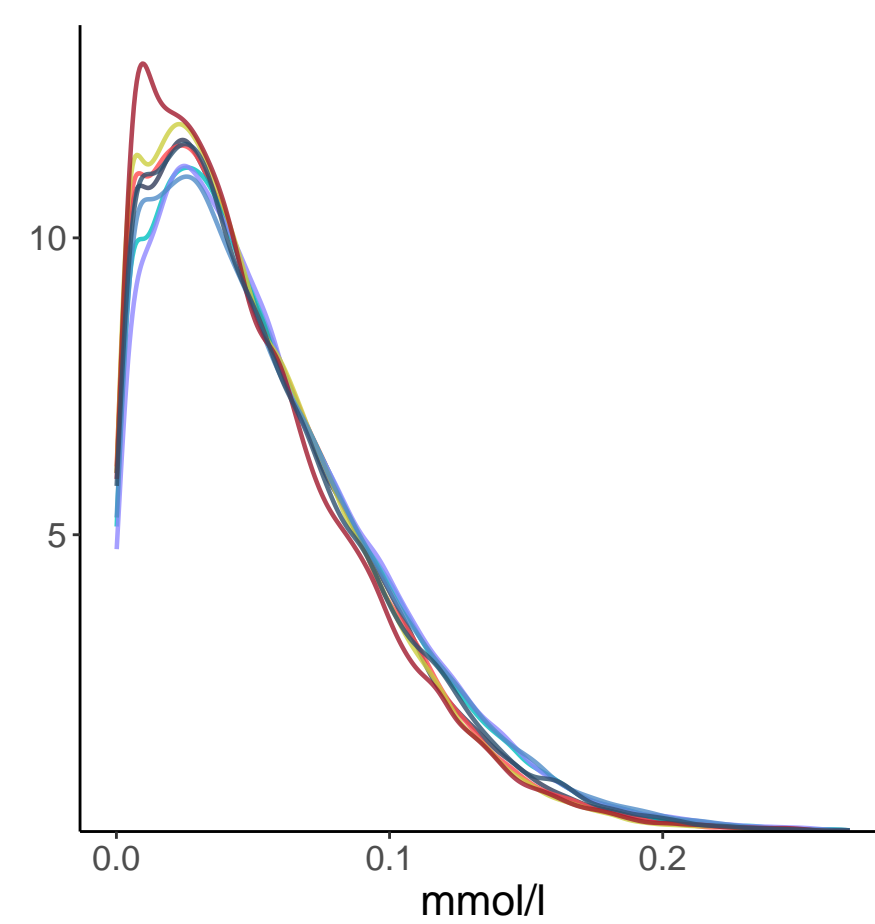
## XXL\_VLDL\_PL

Spectrometer



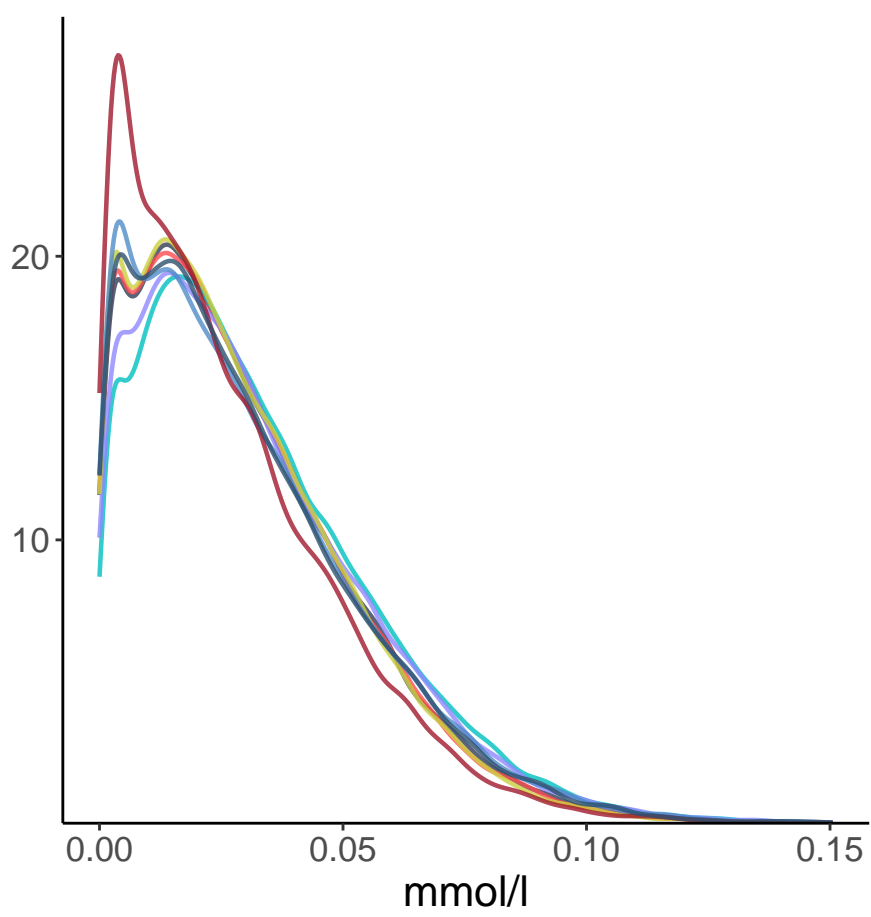
## XXL\_VLDL\_C

Spectrometer



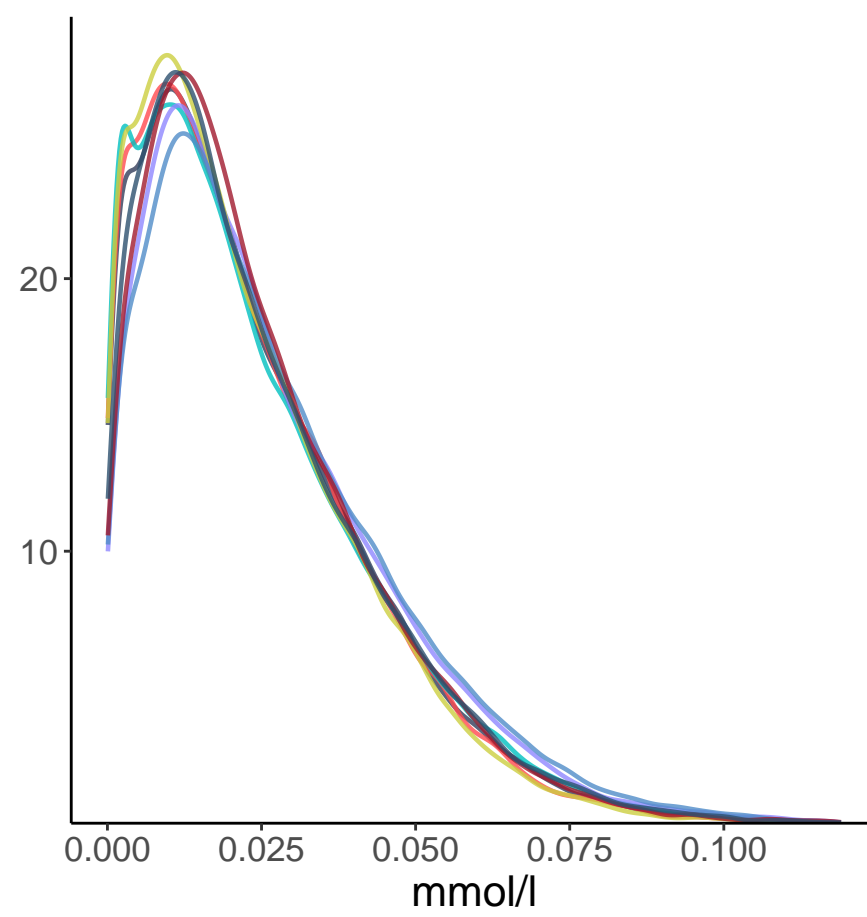
## XXL\_VLDL\_CE

Spectrometer



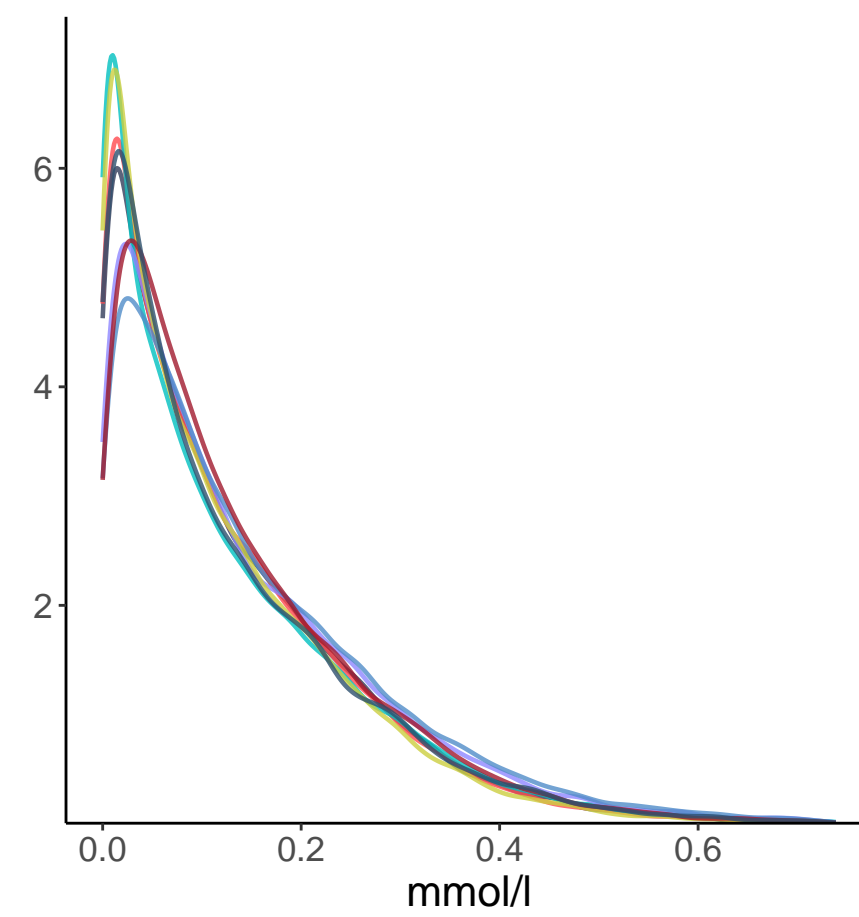
## XXL\_VLDL\_FC

Spectrometer



## XXL\_VLDL\_TG

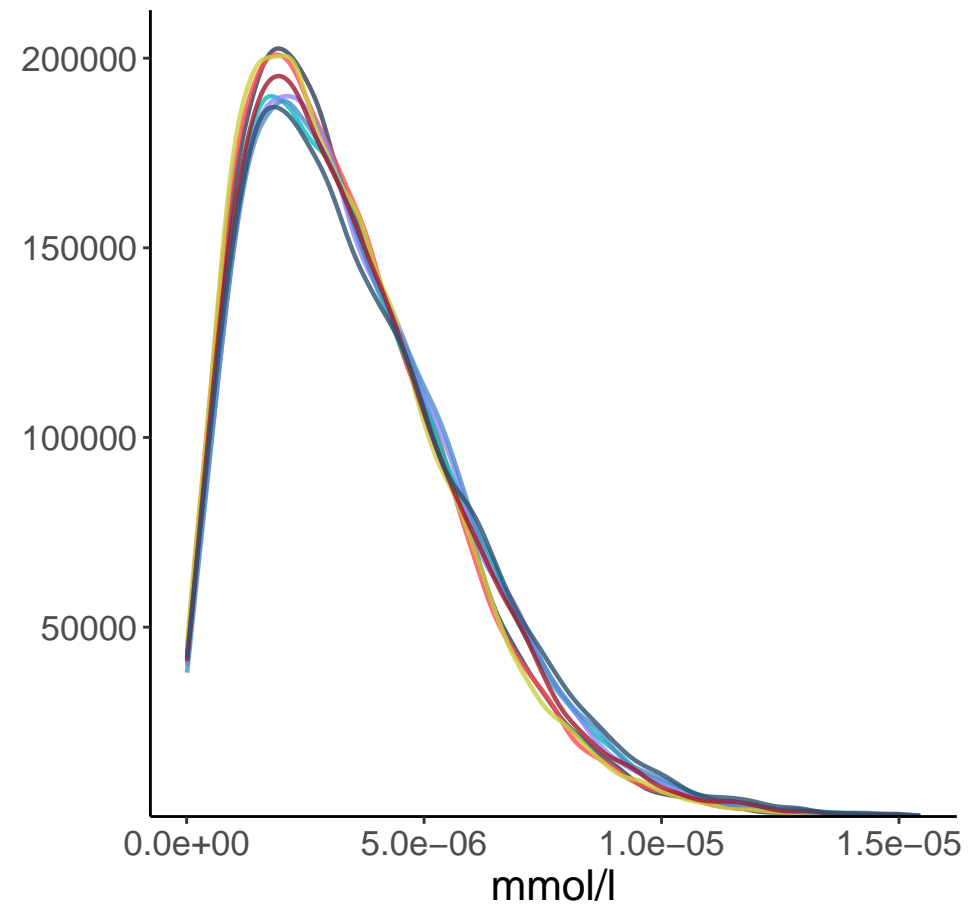
Spectrometer



# Very large VLDL (average diameter 64 nm)

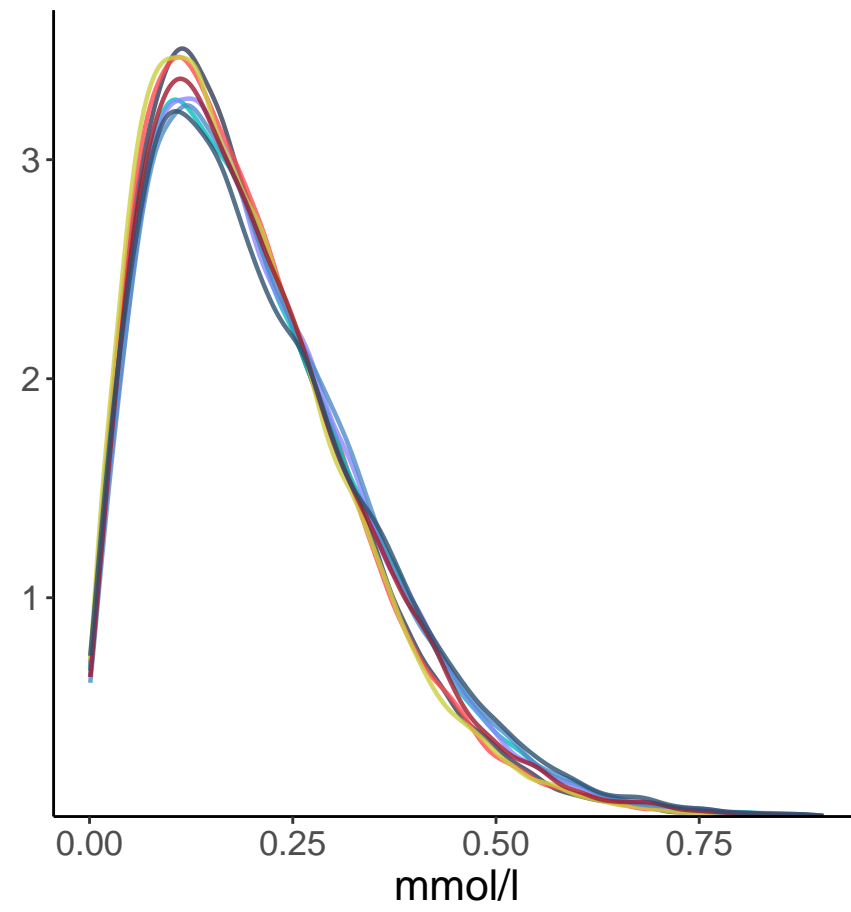
## XL\_VLDL\_P

Spectrometer



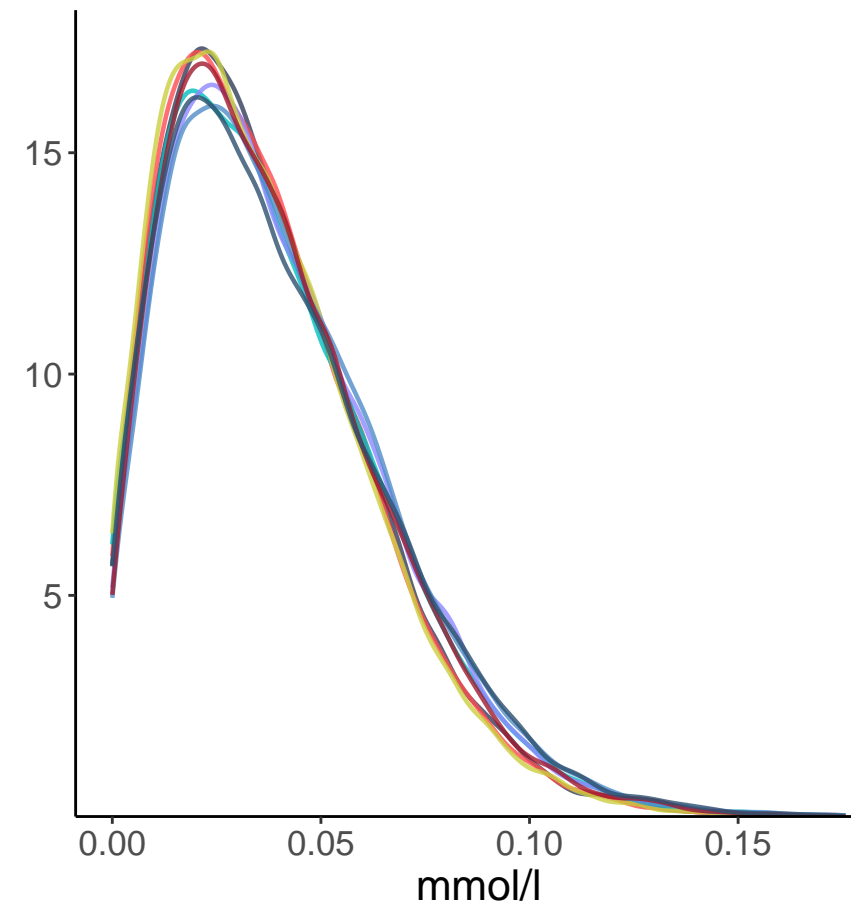
## XL\_VLDL\_L

Spectrometer



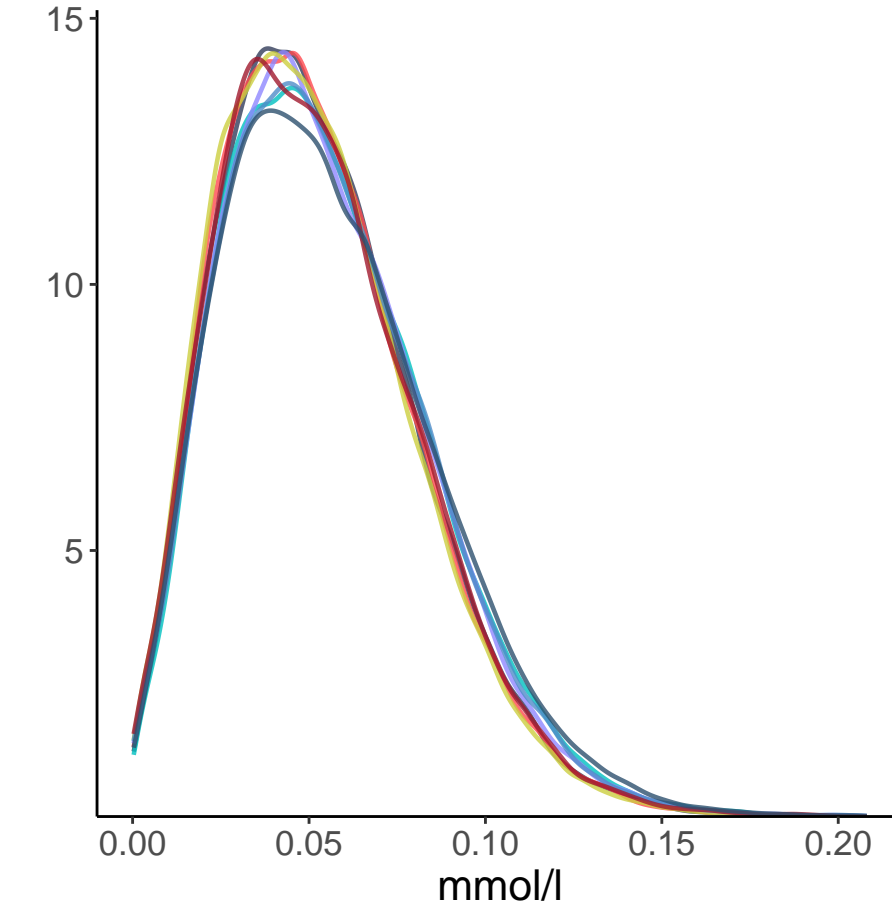
## XL\_VLDL\_PL

Spectrometer



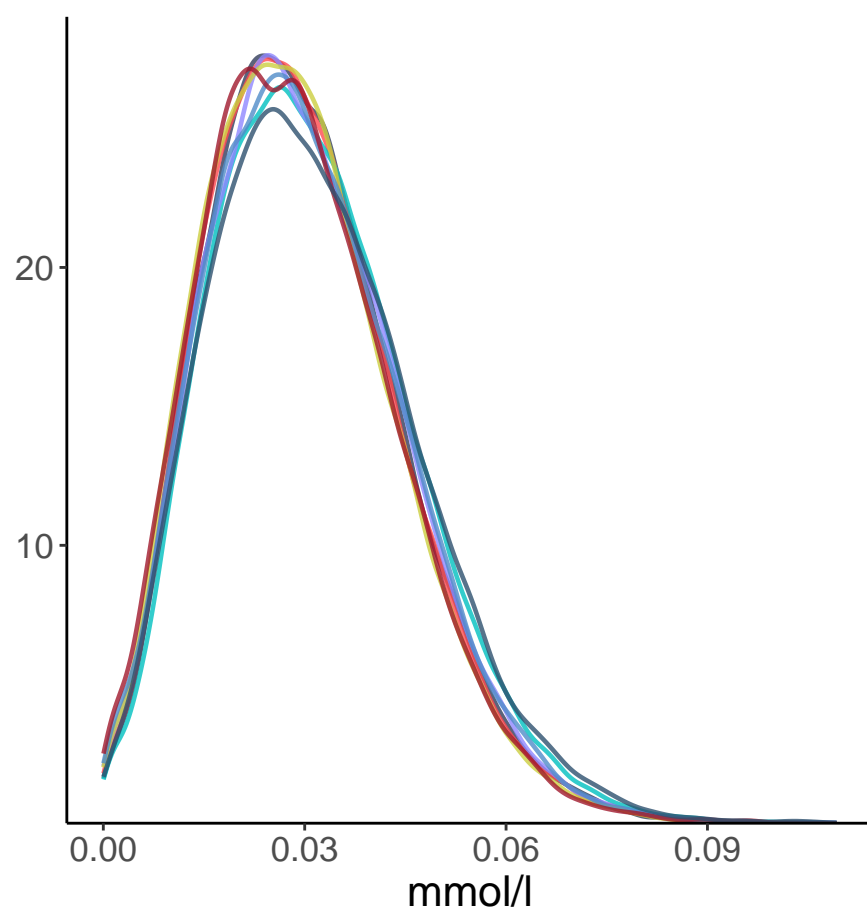
## XL\_VLDL\_C

Spectrometer



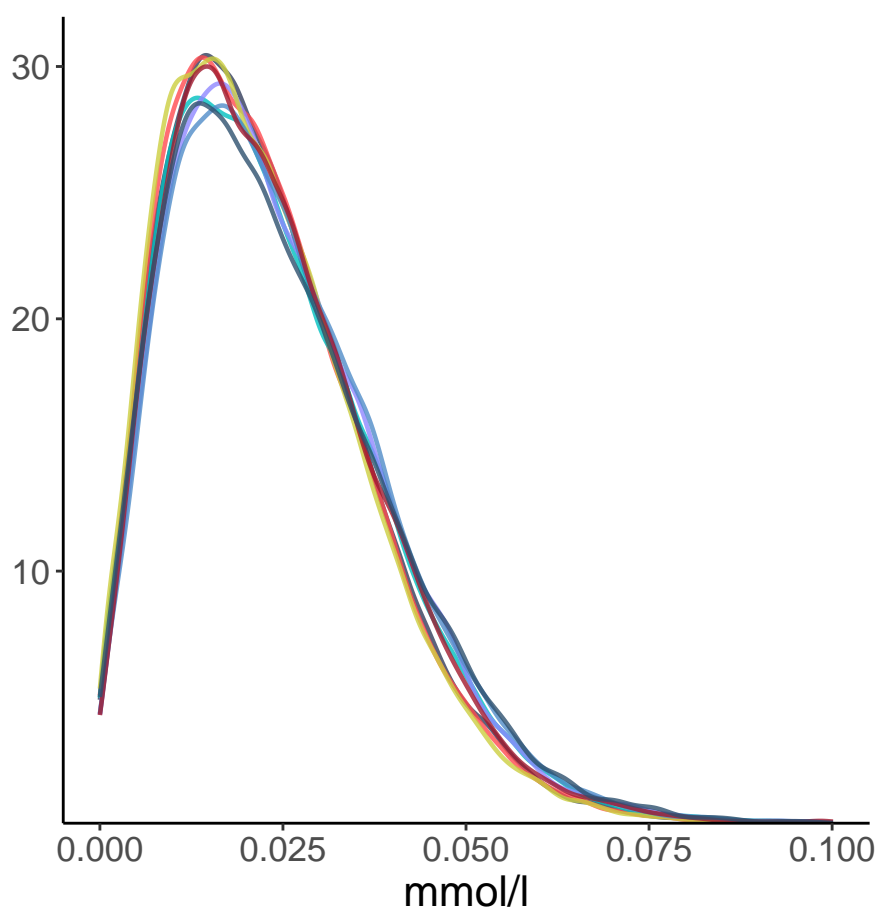
## XL\_VLDL\_CE

Spectrometer



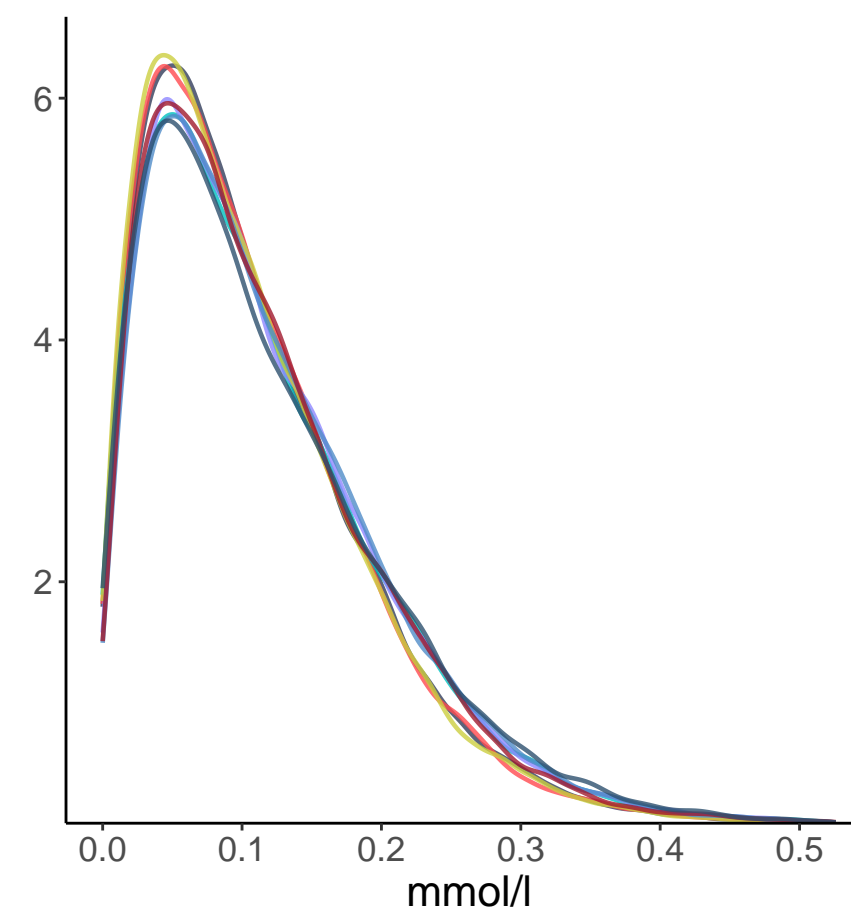
## XL\_VLDL\_FC

Spectrometer



## XL\_VLDL\_TG

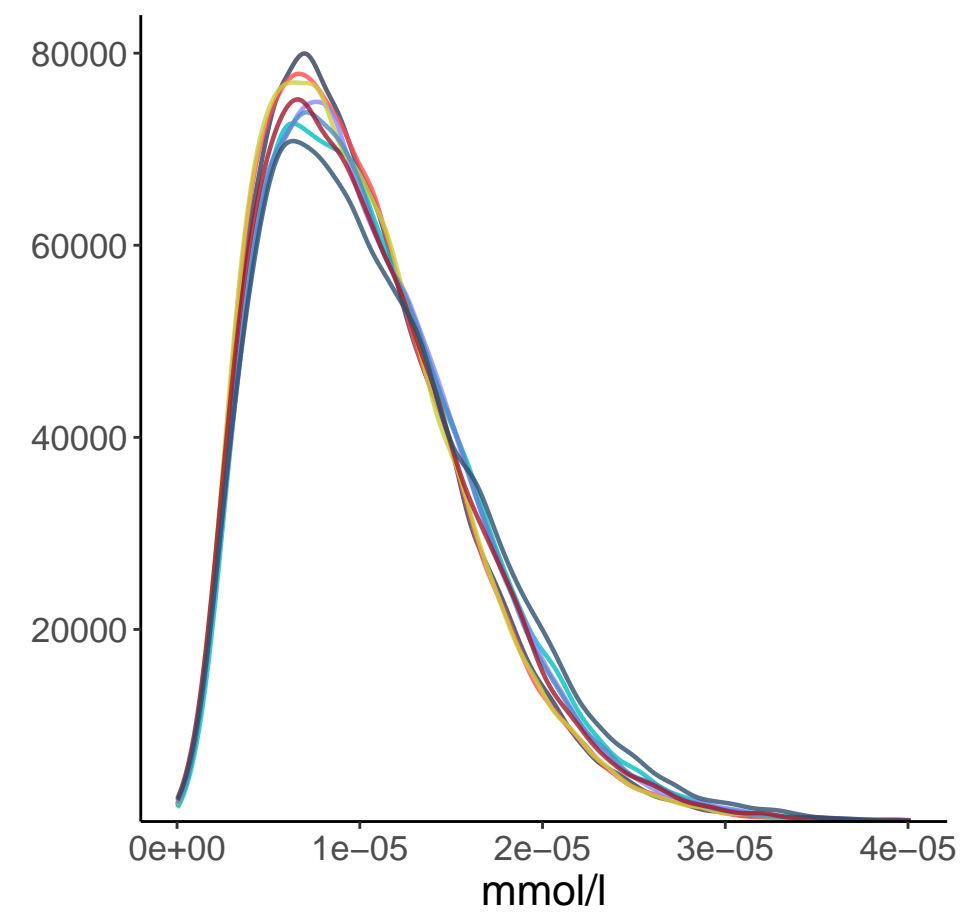
Spectrometer



# Large VLDL (average diameter 53.6 nm)

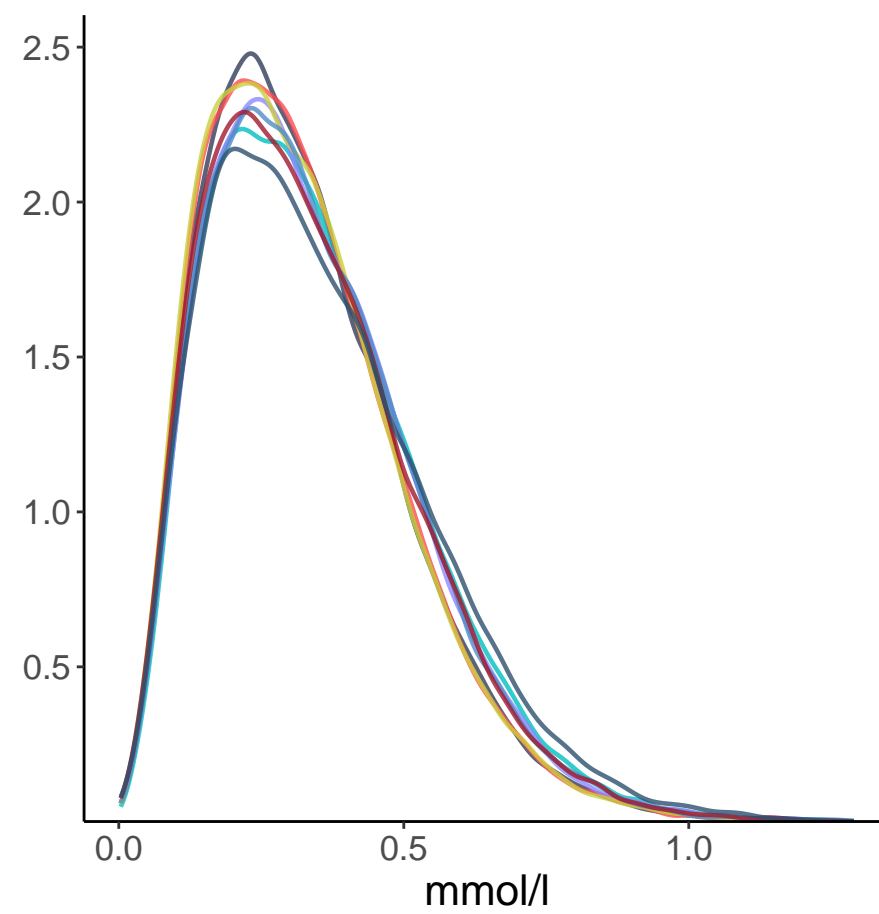
## L\_VLDL\_P

Spectrometer



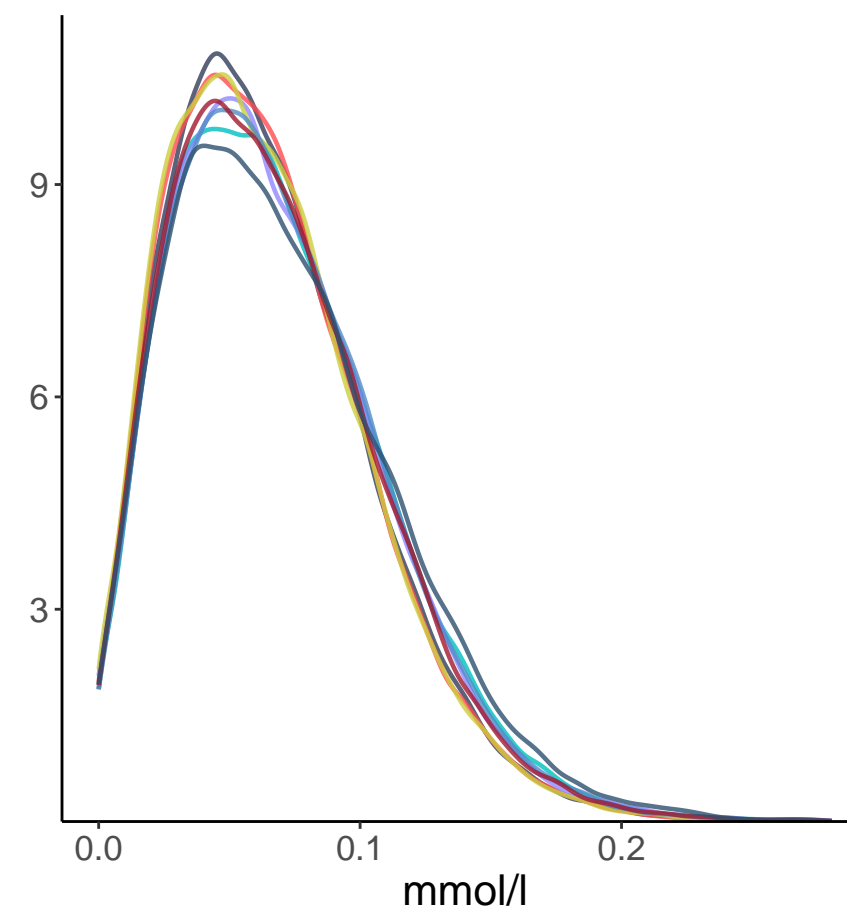
## L\_VLDL\_L

Spectrometer



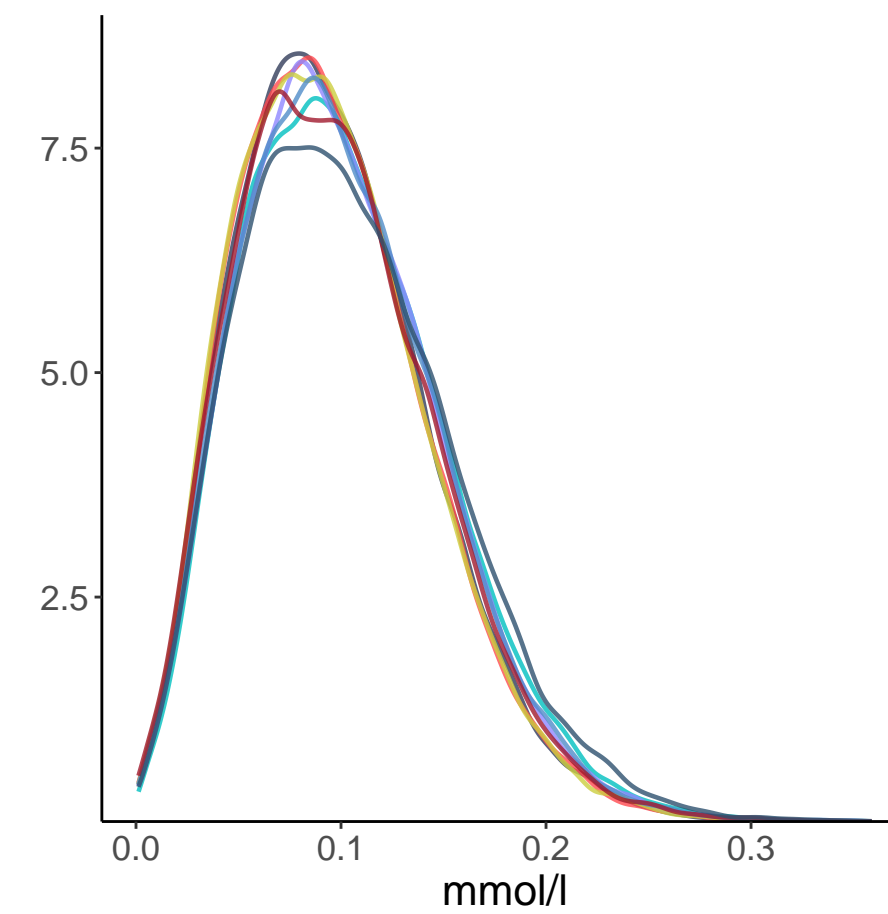
## L\_VLDL\_PL

Spectrometer



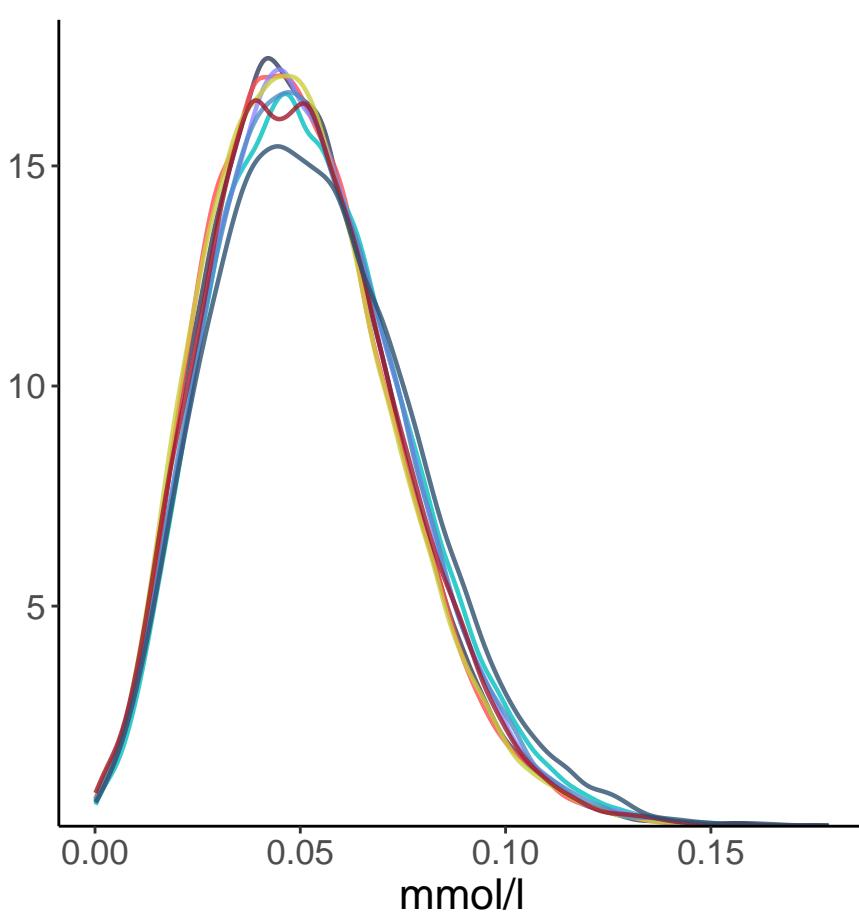
## L\_VLDL\_C

Spectrometer



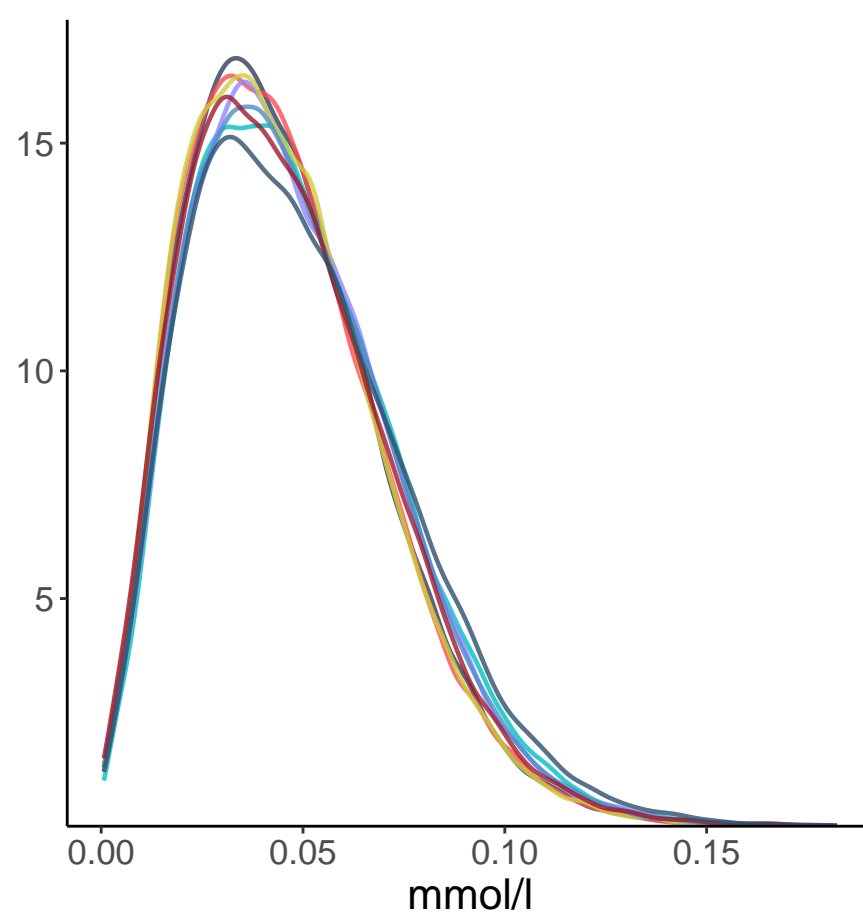
## L\_VLDL\_CE

Spectrometer



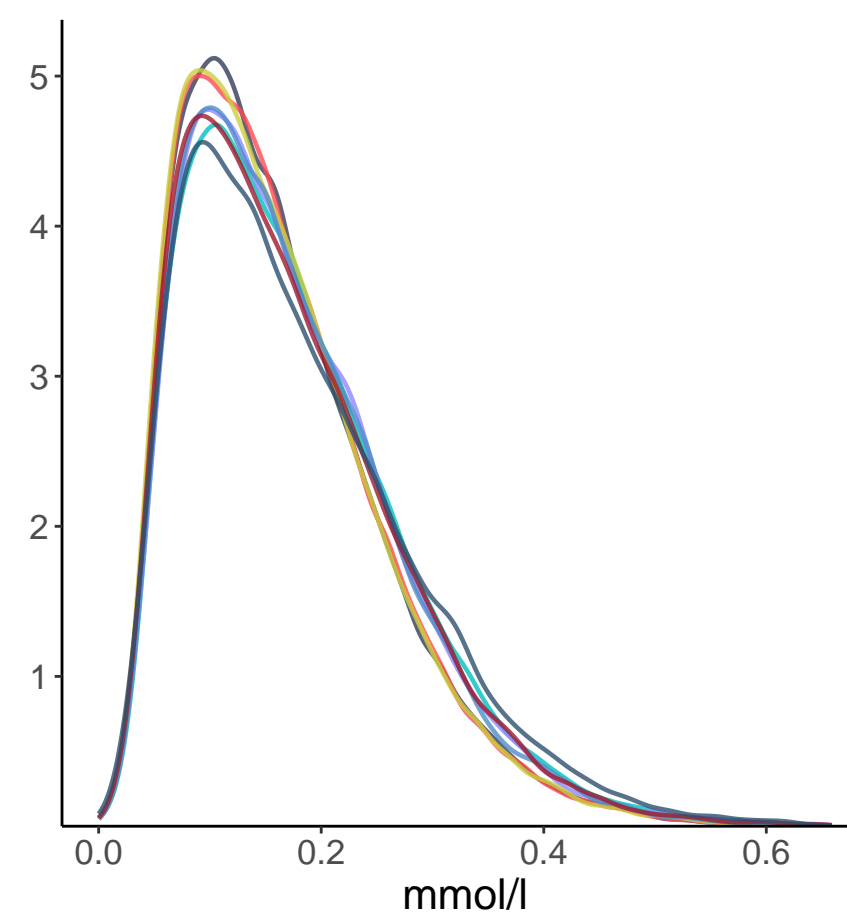
## L\_VLDL\_FC

Spectrometer



## L\_VLDL\_TG

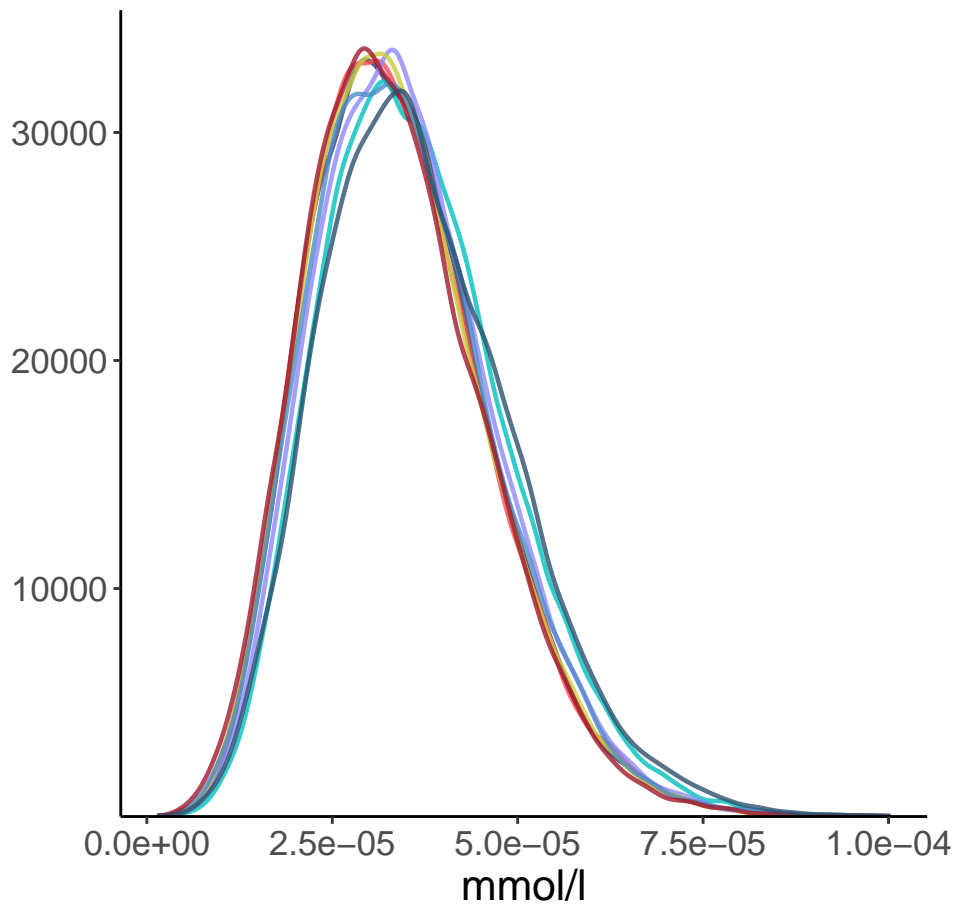
Spectrometer



# Medium VLDL (average diameter 44.5 nm)

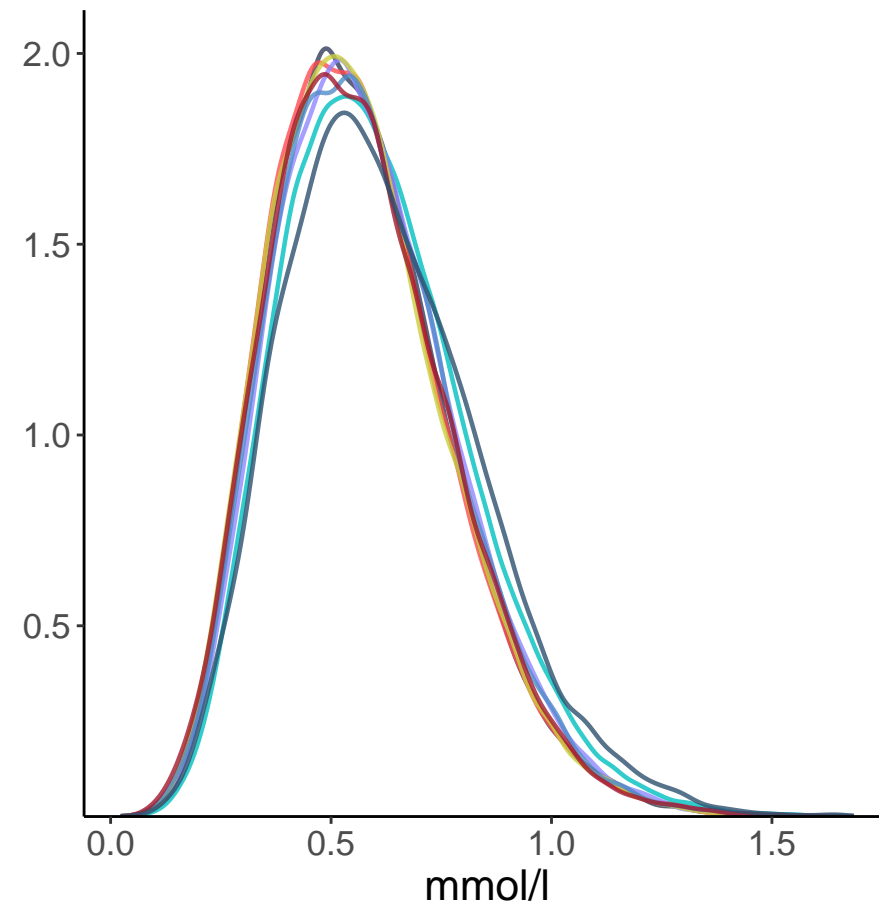
## M\_VLDL\_P

Spectrometer



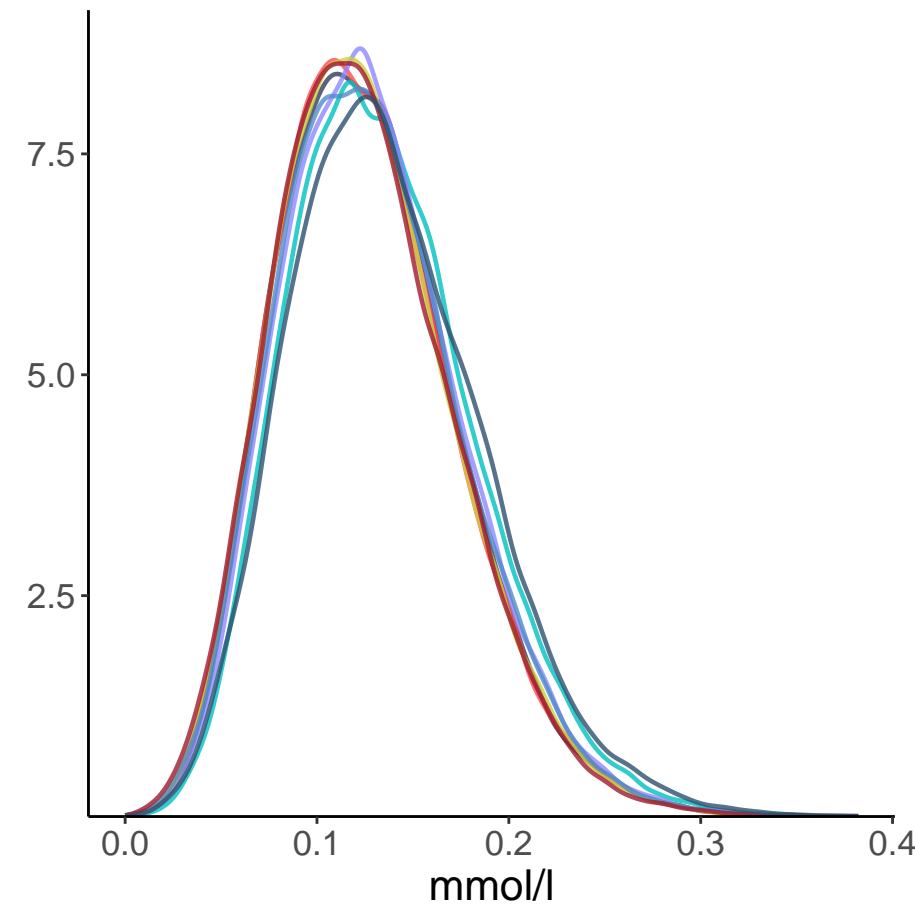
## M\_VLDL\_L

Spectrometer



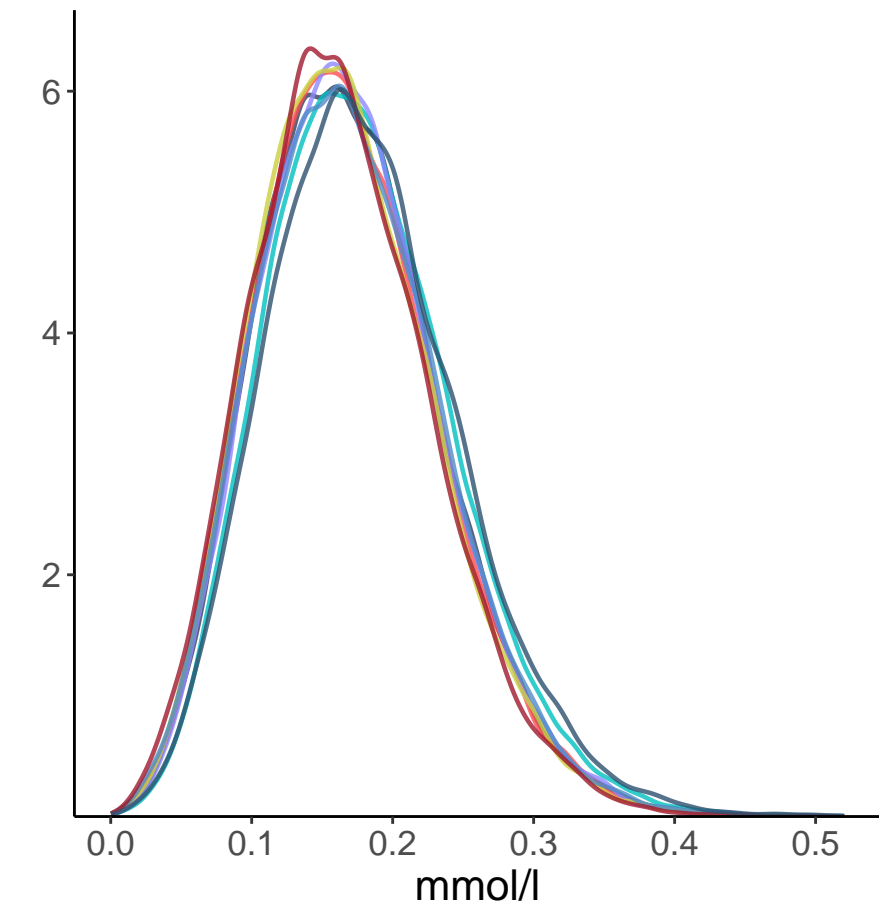
## M\_VLDL\_PL

Spectrometer



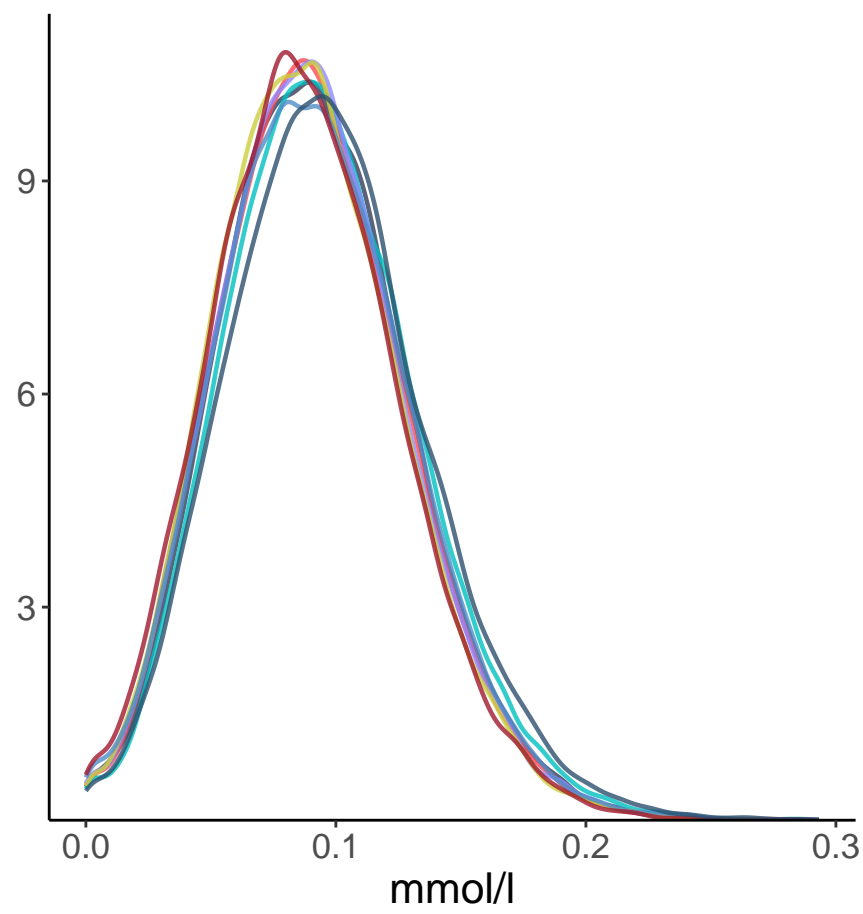
## M\_VLDL\_C

Spectrometer



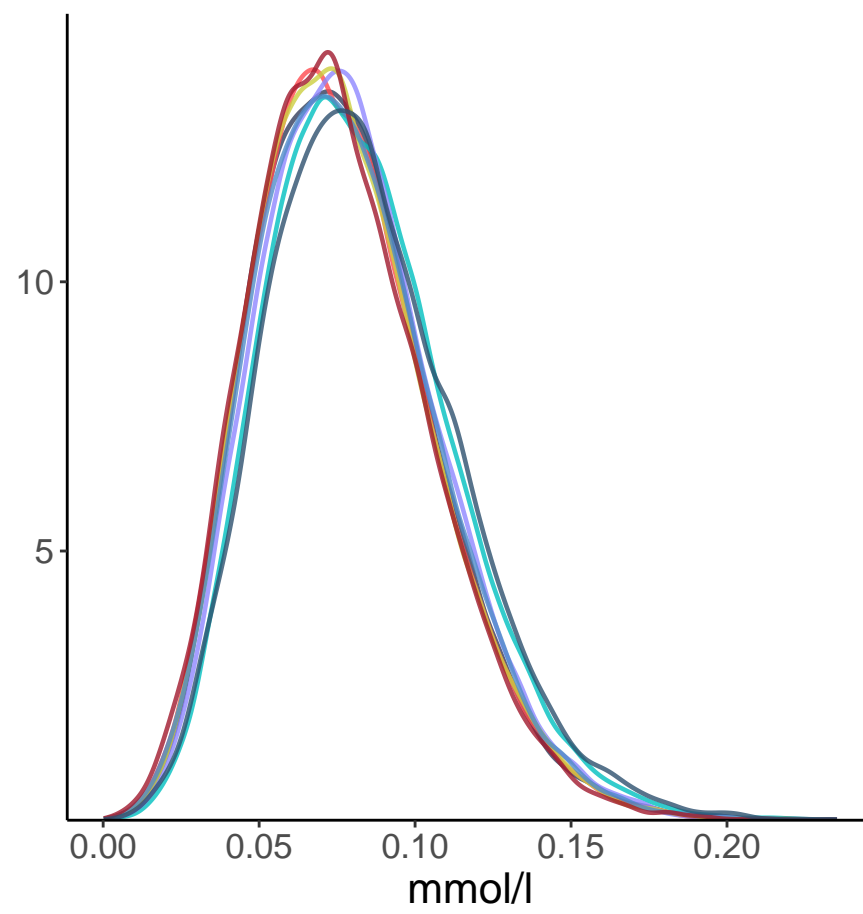
## M\_VLDL\_CE

Spectrometer



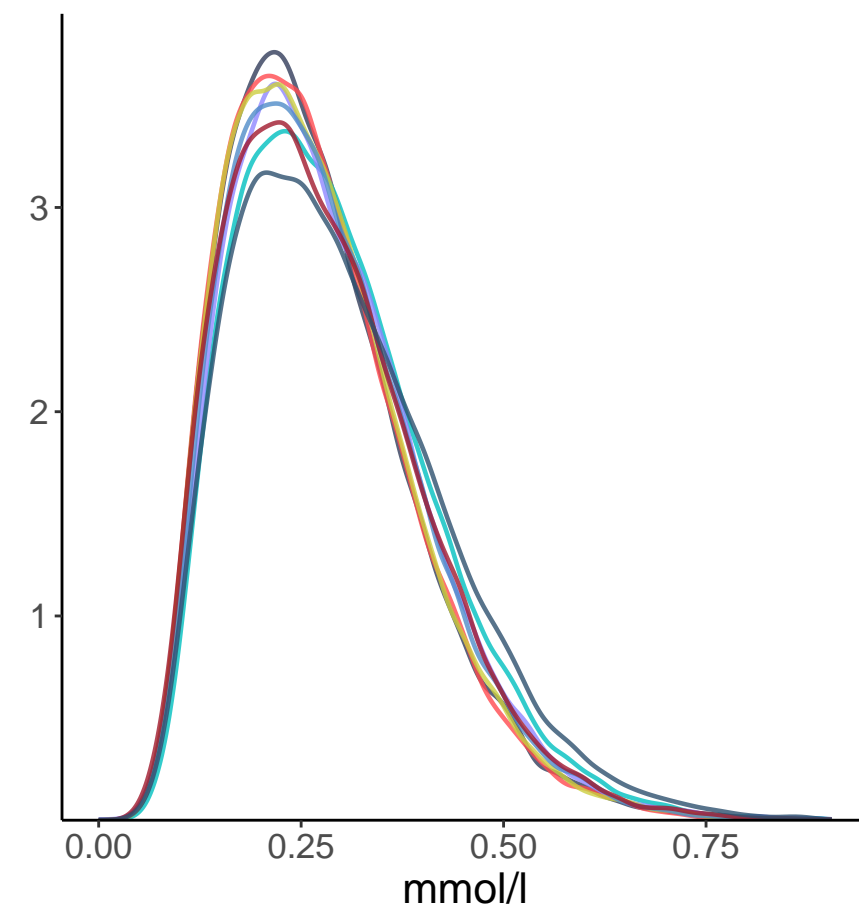
## M\_VLDL\_FC

Spectrometer



## M\_VLDL\_TG

Spectrometer

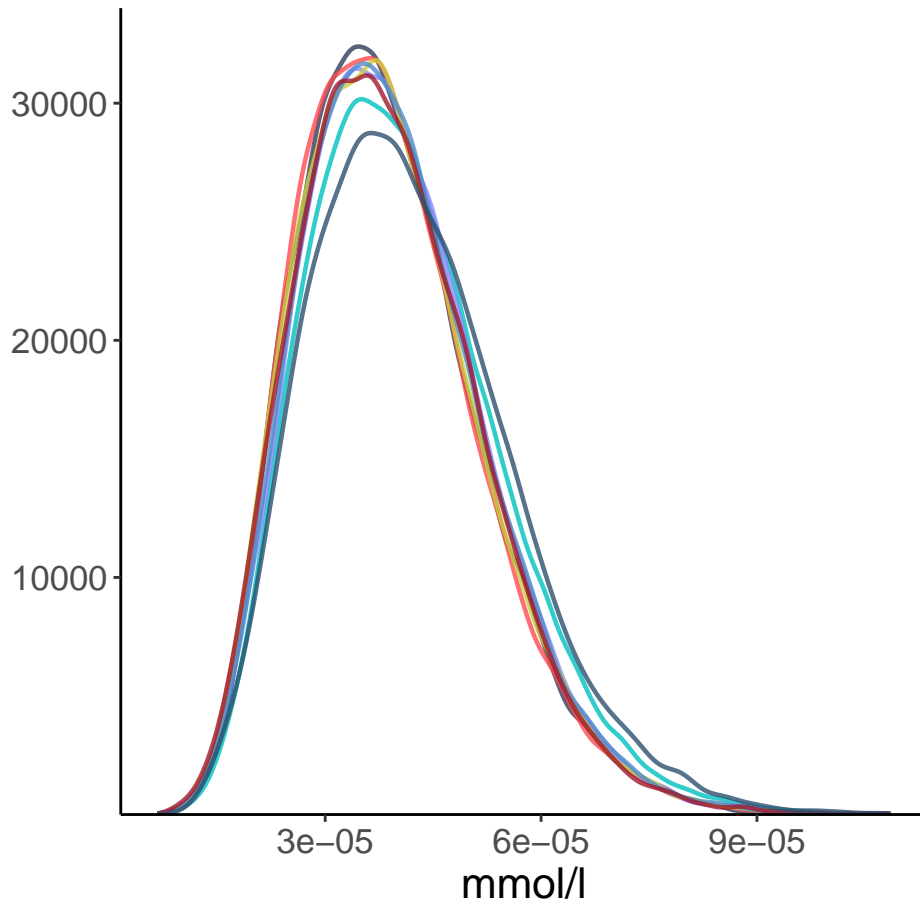




# Small VLDL (average diameter 36.8 nm)

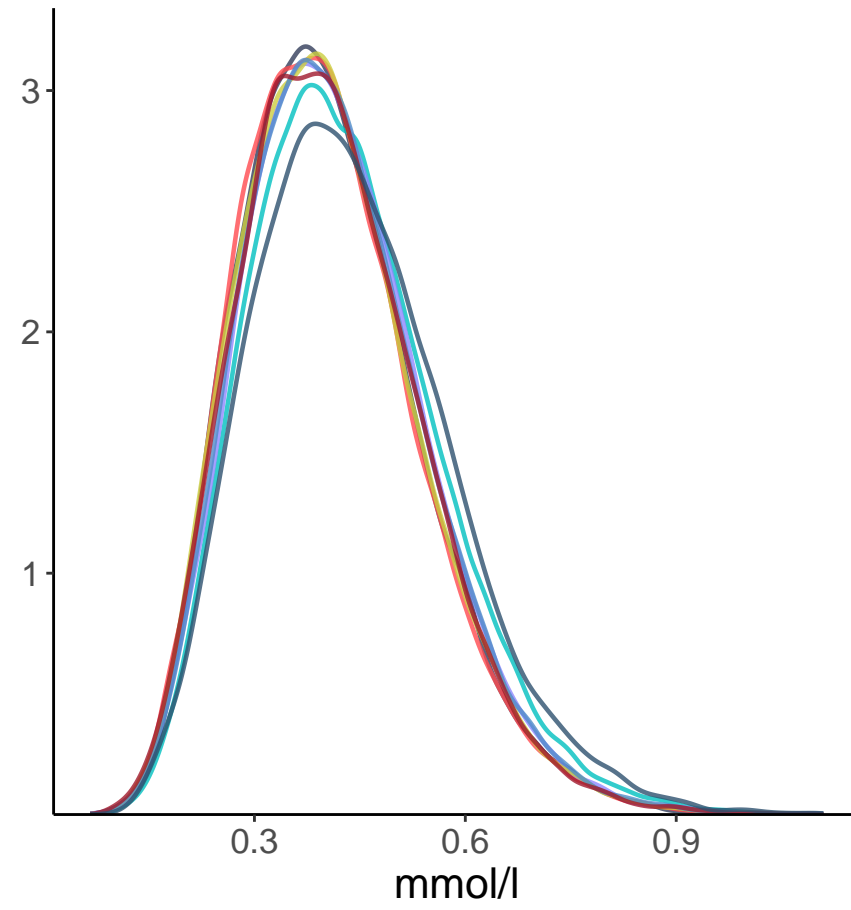
## S\_VLDL\_P

Spectrometer



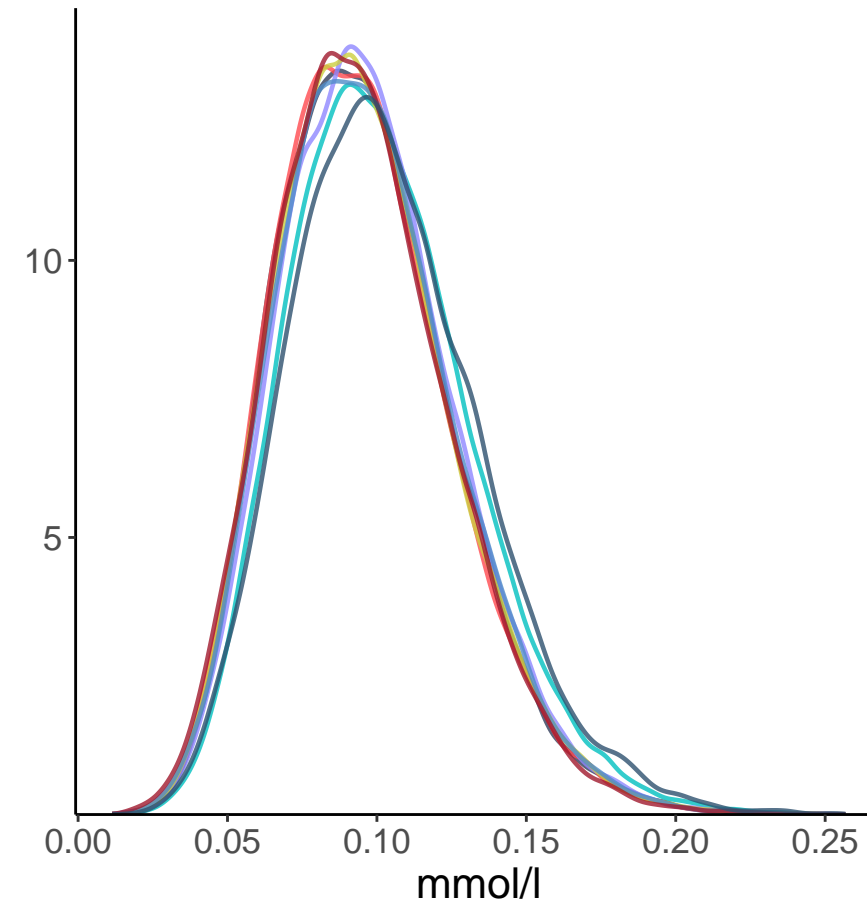
## S\_VLDL\_L

Spectrometer



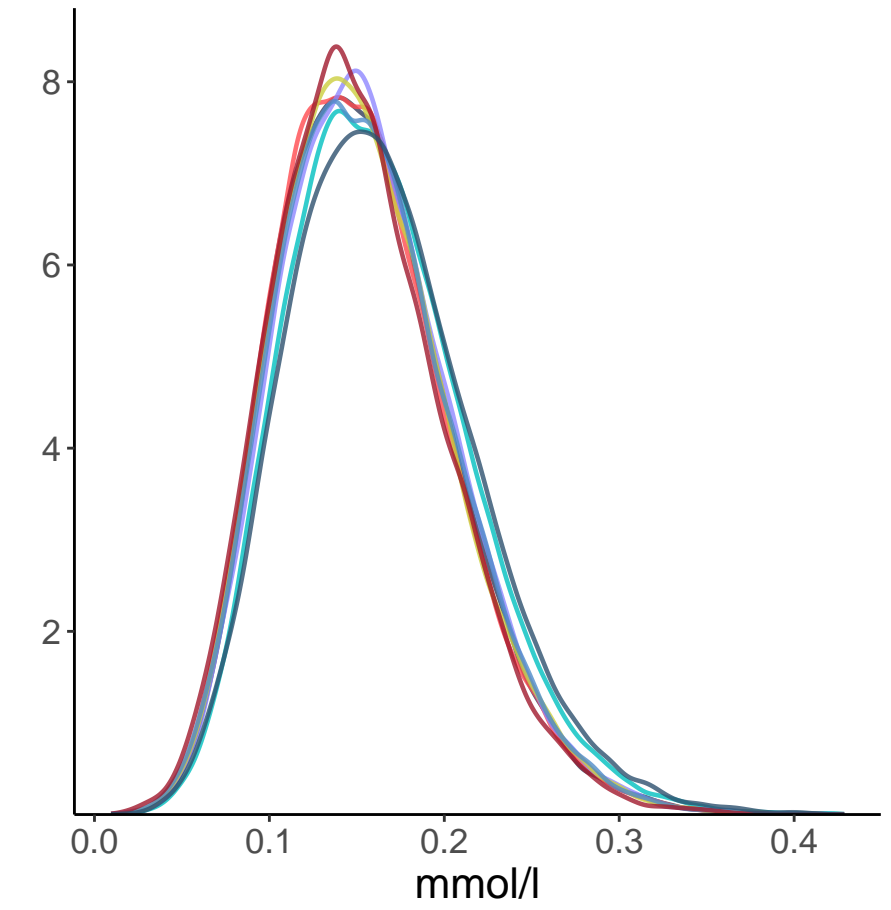
## S\_VLDL\_PL

Spectrometer



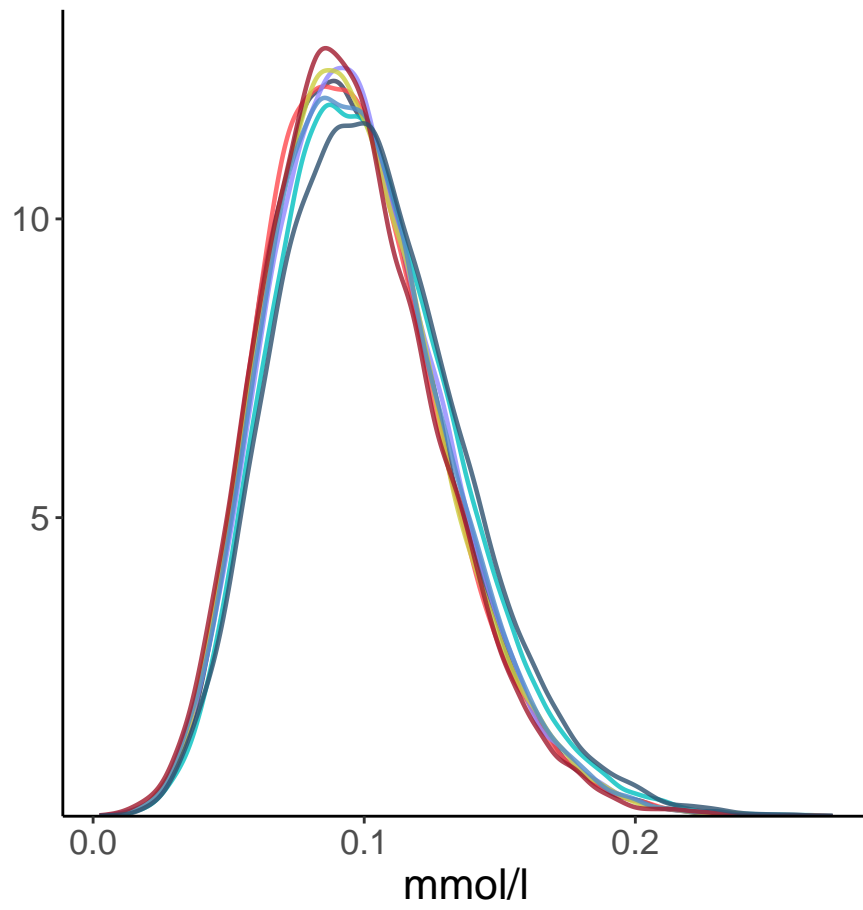
## S\_VLDL\_C

Spectrometer



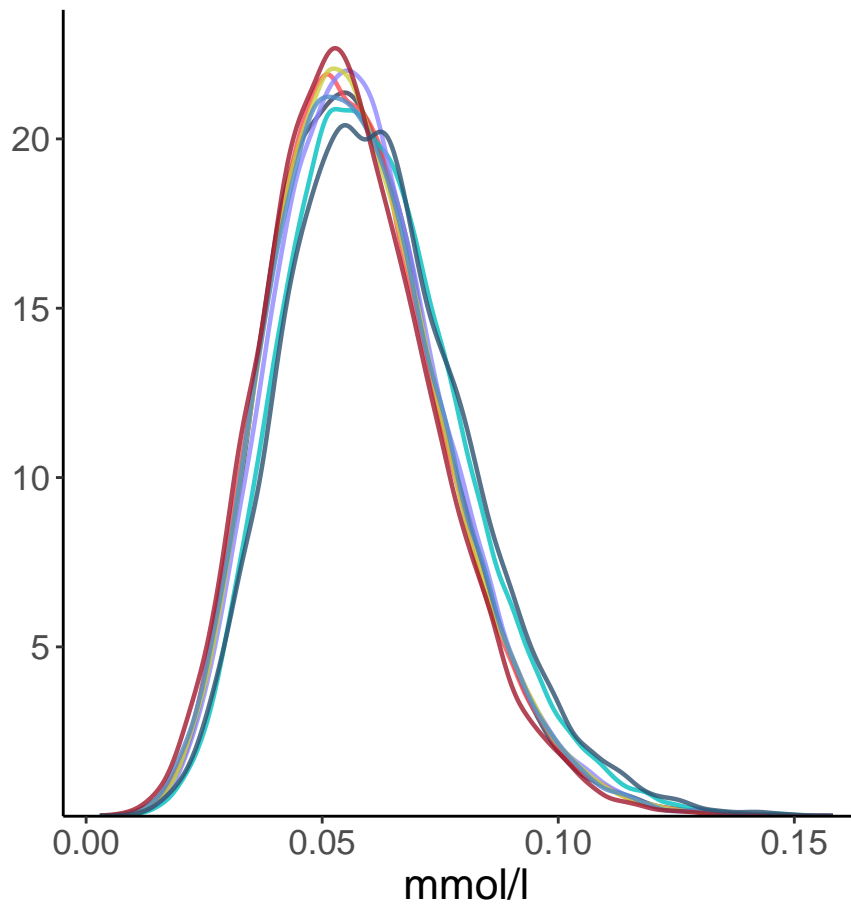
## S\_VLDL\_CE

Spectrometer



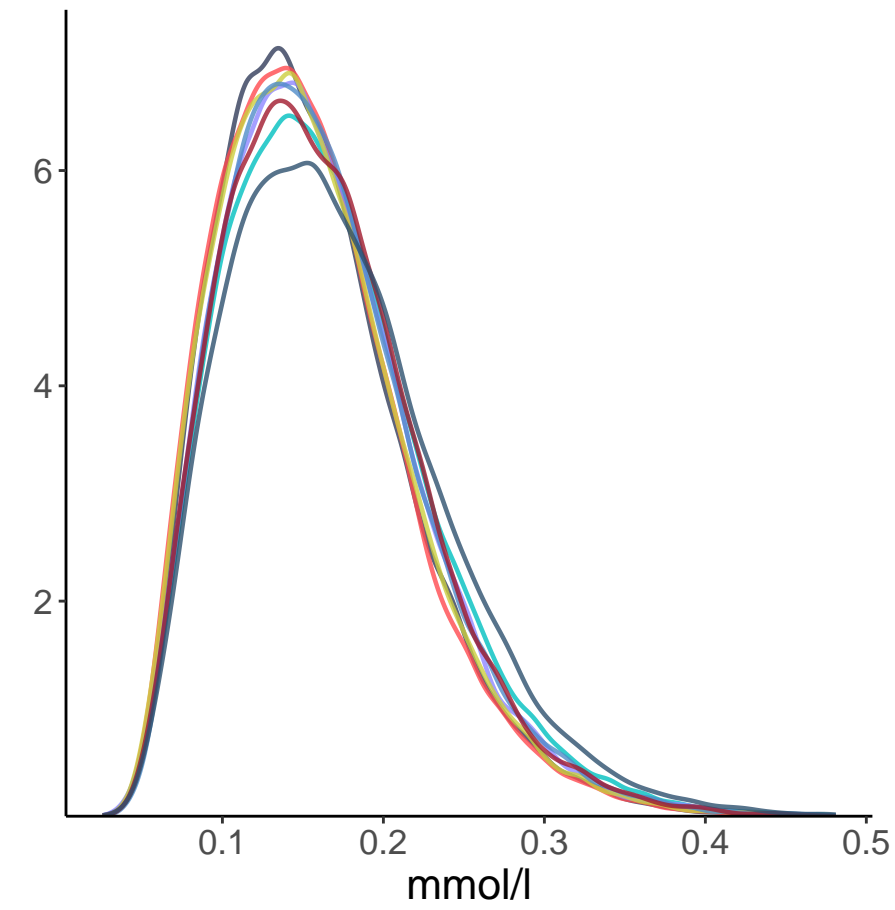
## S\_VLDL\_FC

Spectrometer



## S\_VLDL\_TG

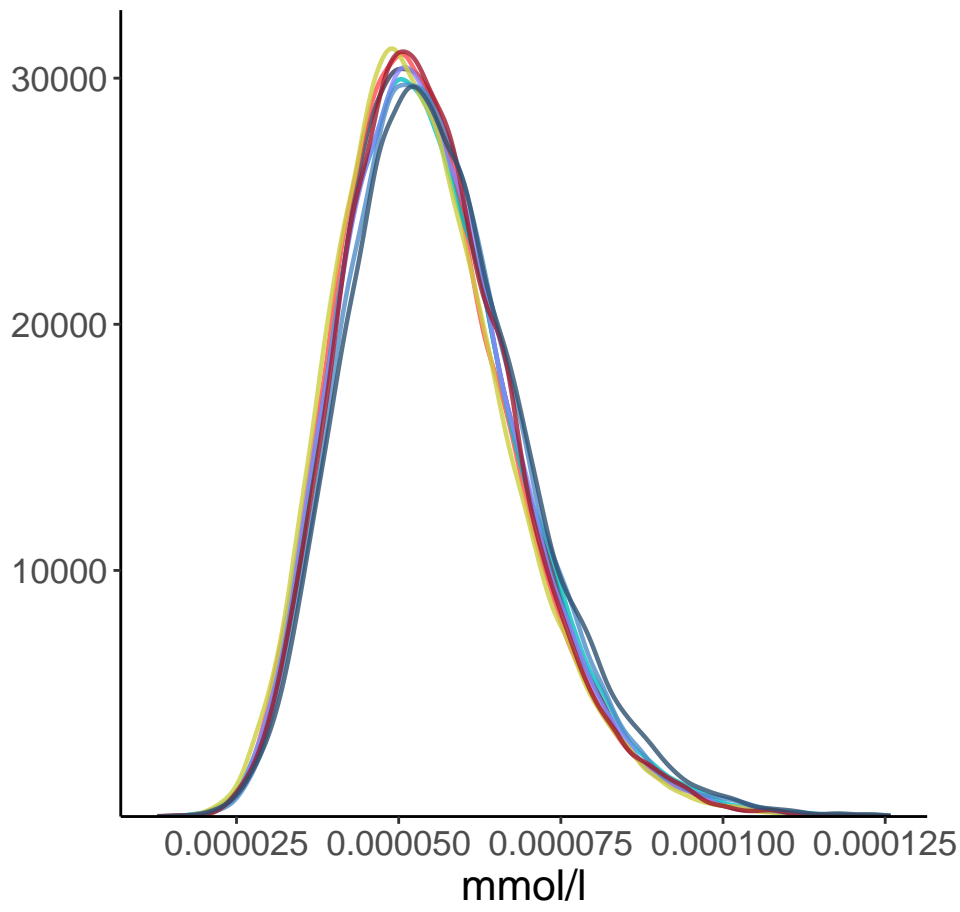
Spectrometer



# Very small VLDL (average diameter 31.3 nm)

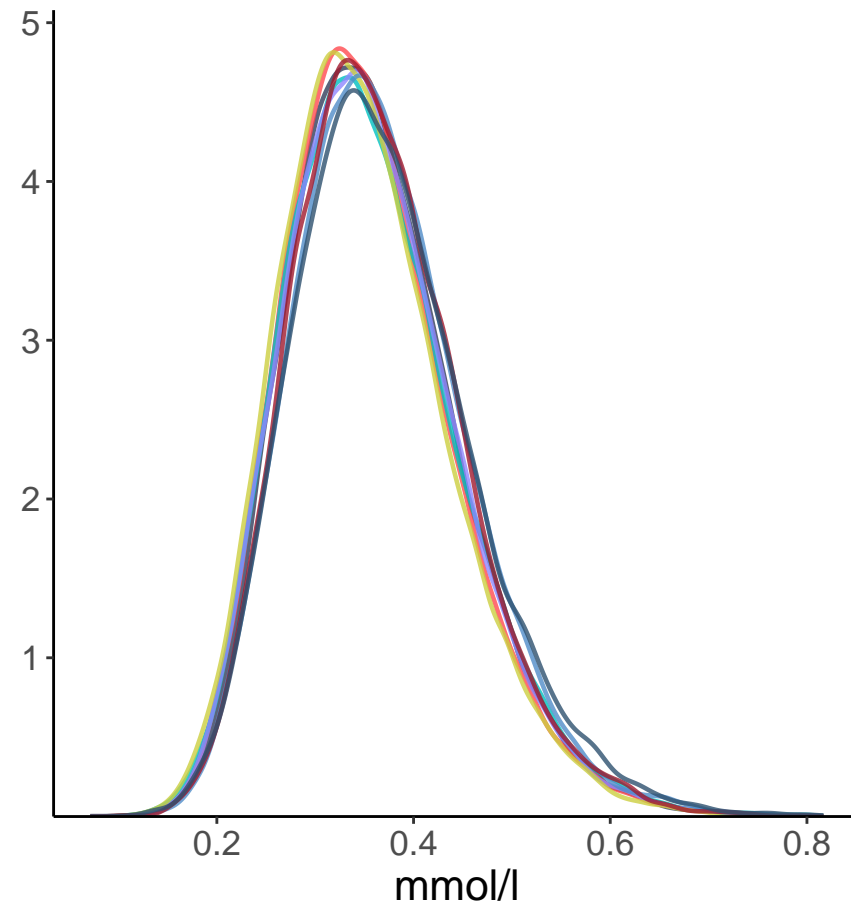
## XS\_VLDL\_P

Spectrometer



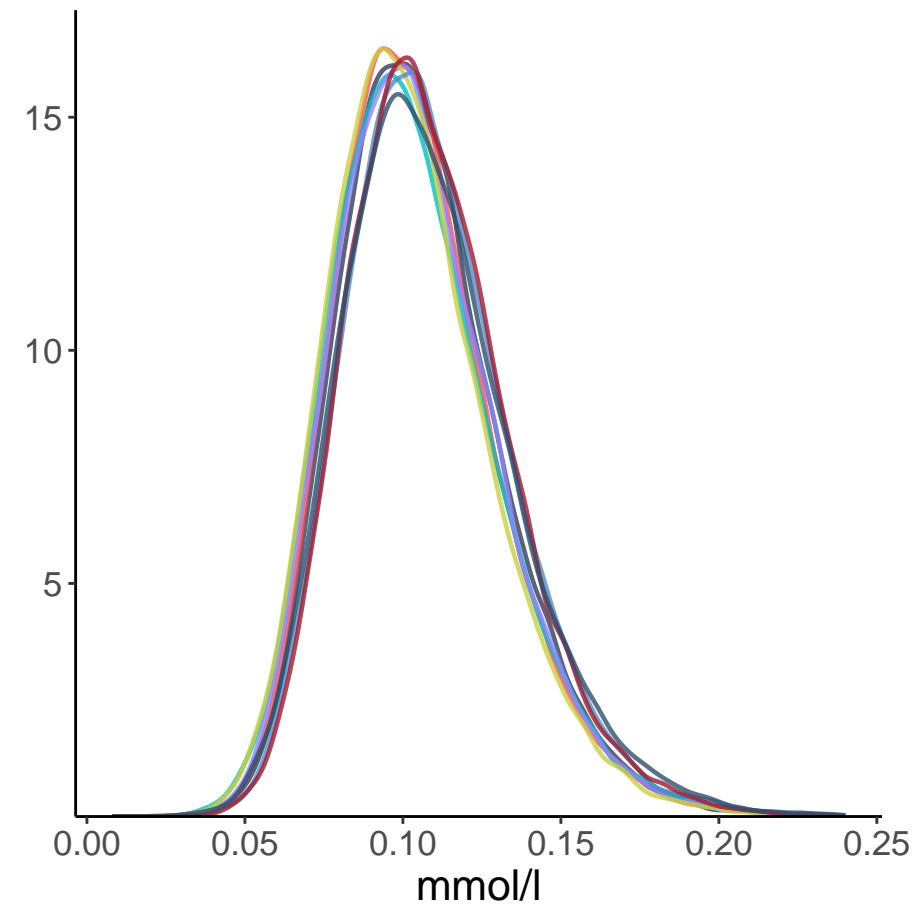
## XS\_VLDL\_L

Spectrometer



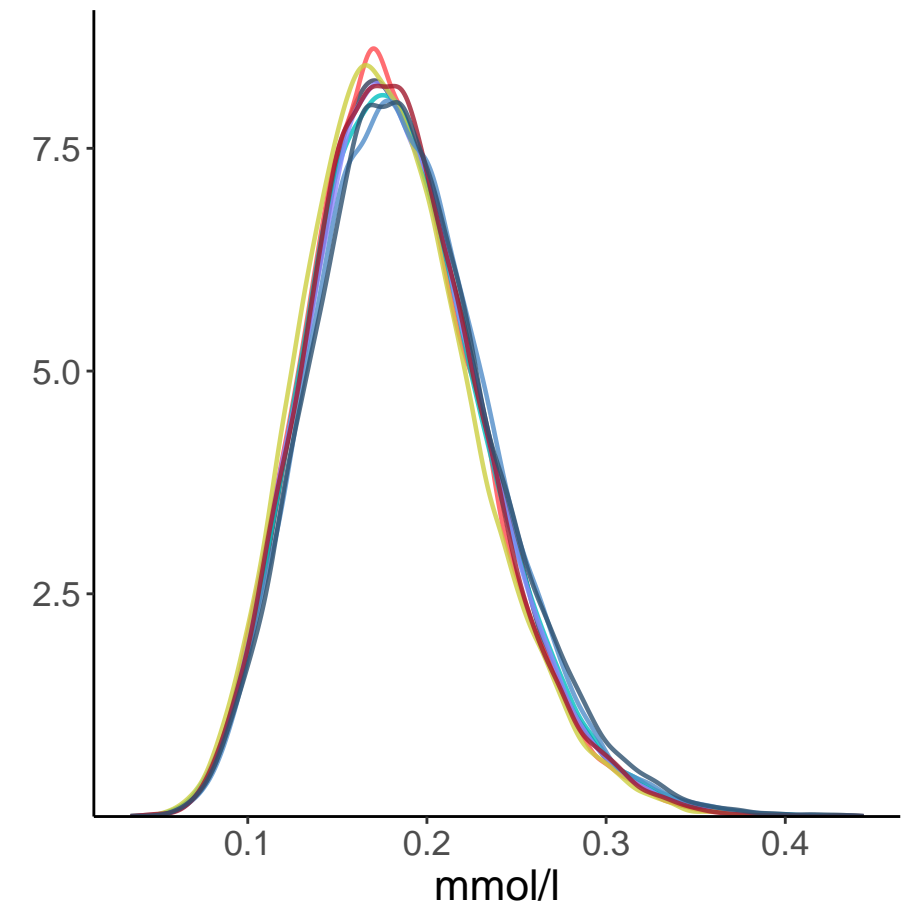
## XS\_VLDL\_PL

Spectrometer



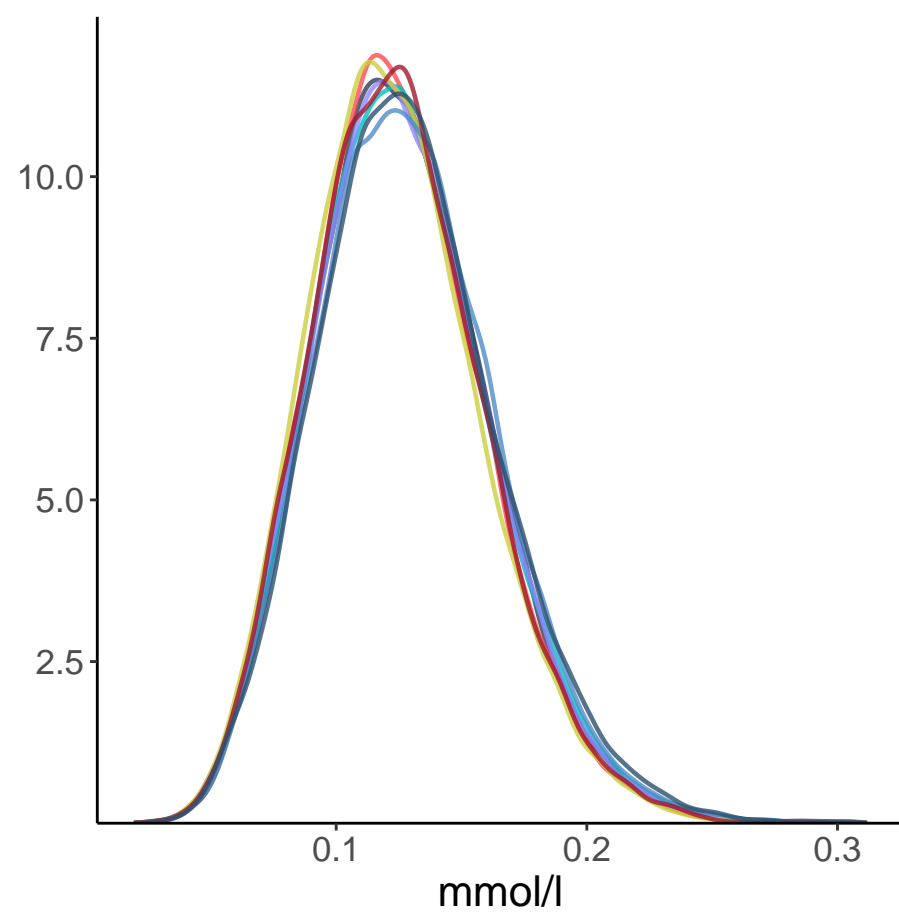
## XS\_VLDL\_C

Spectrometer



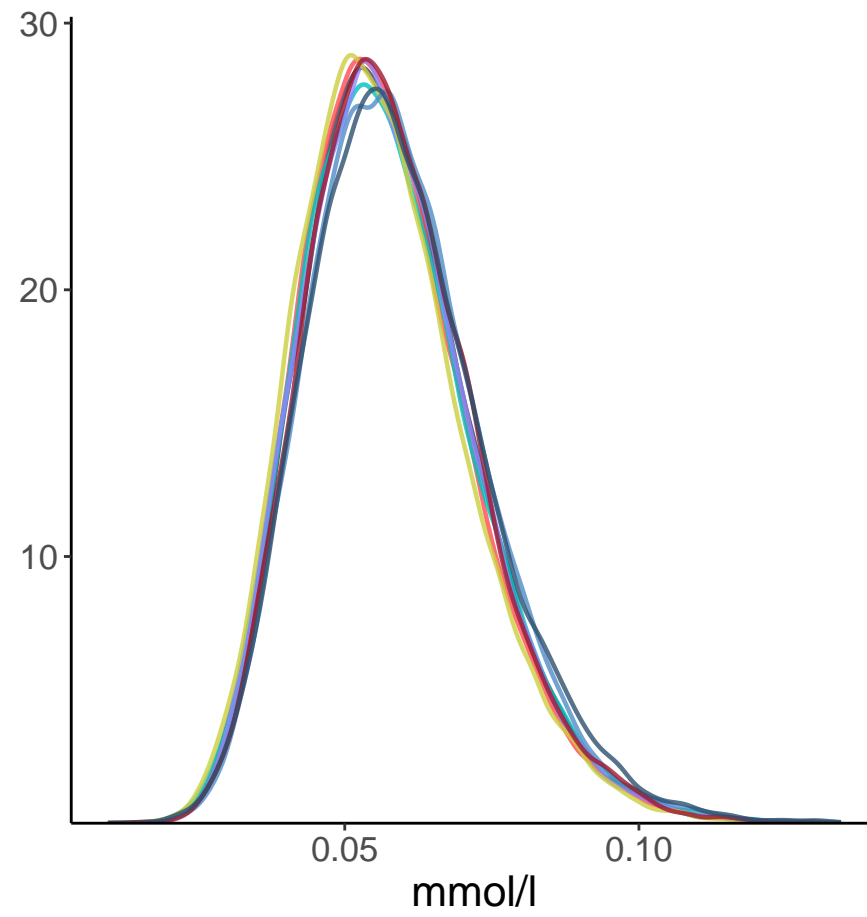
## XS\_VLDL\_CE

Spectrometer



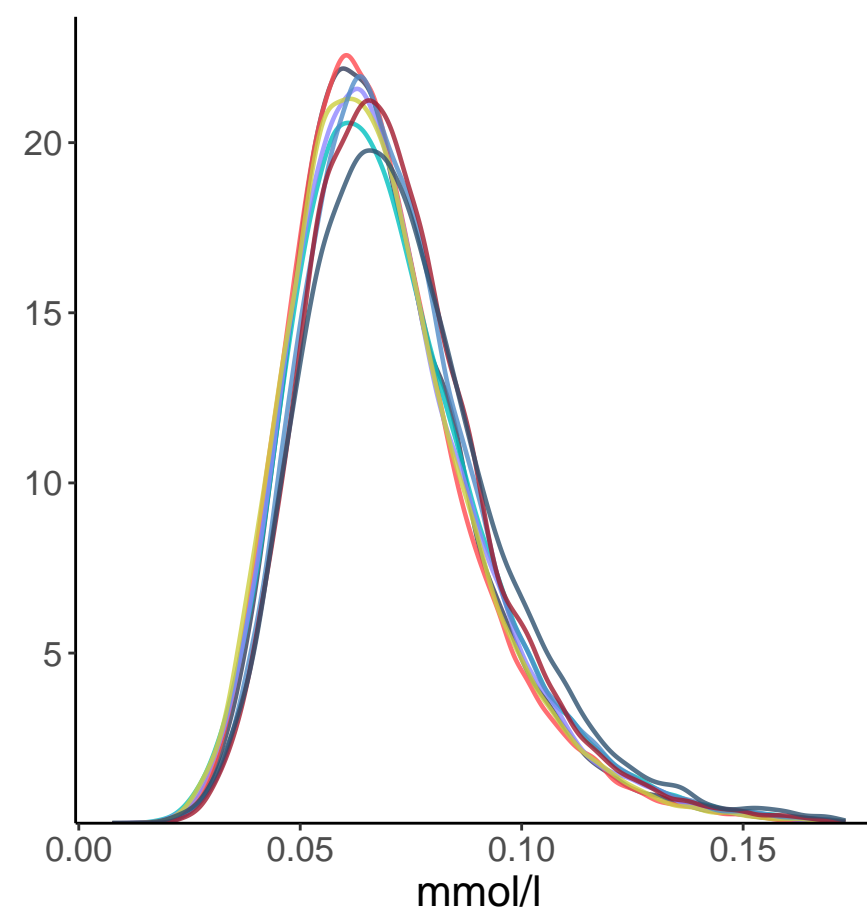
## XS\_VLDL\_FC

Spectrometer



## XS\_VLDL\_TG

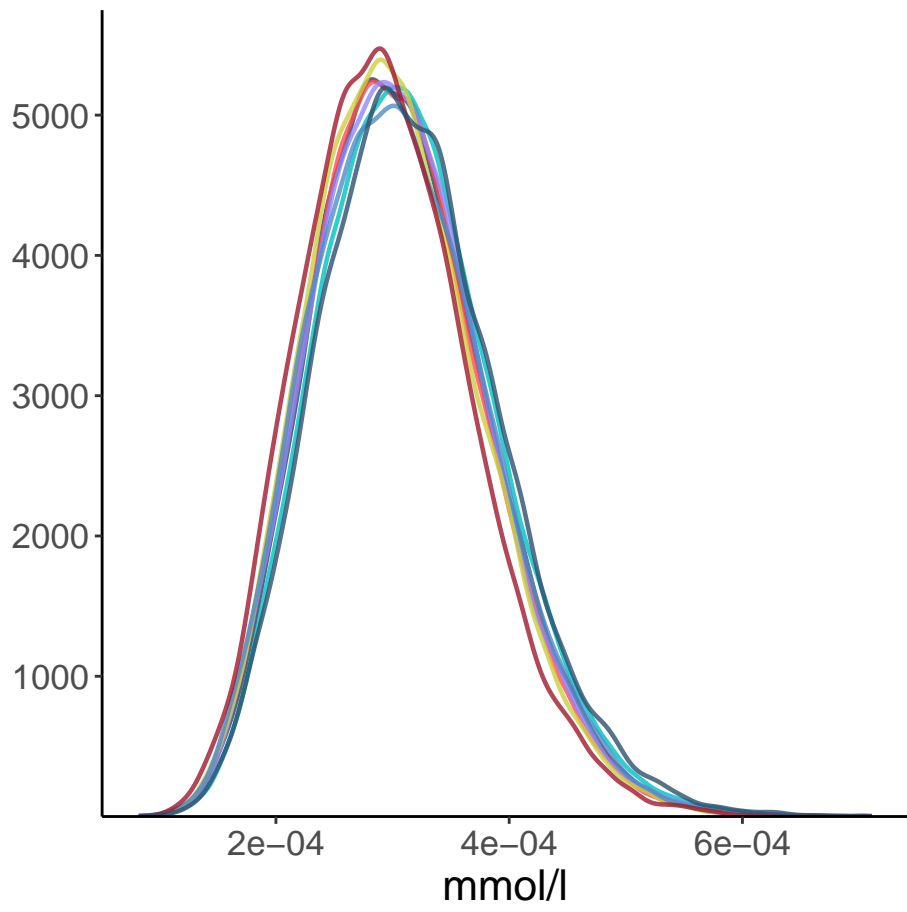
Spectrometer



# IDL (average diameter 28.6 nm)

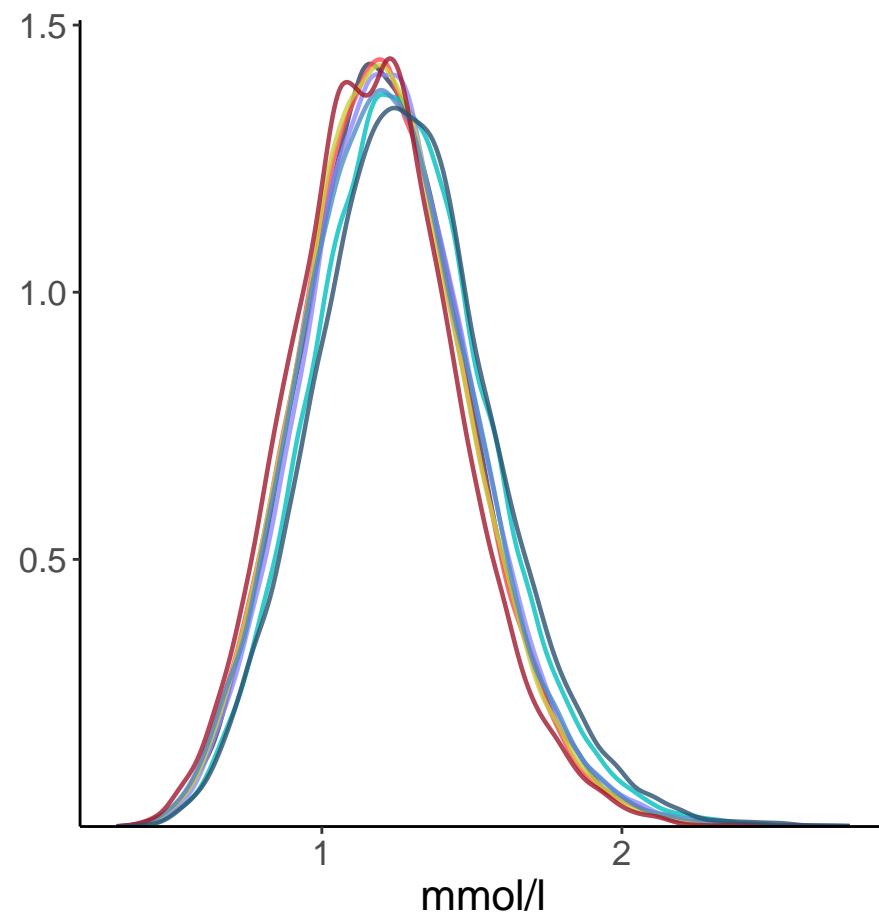
## IDL\_P

Spectrometer



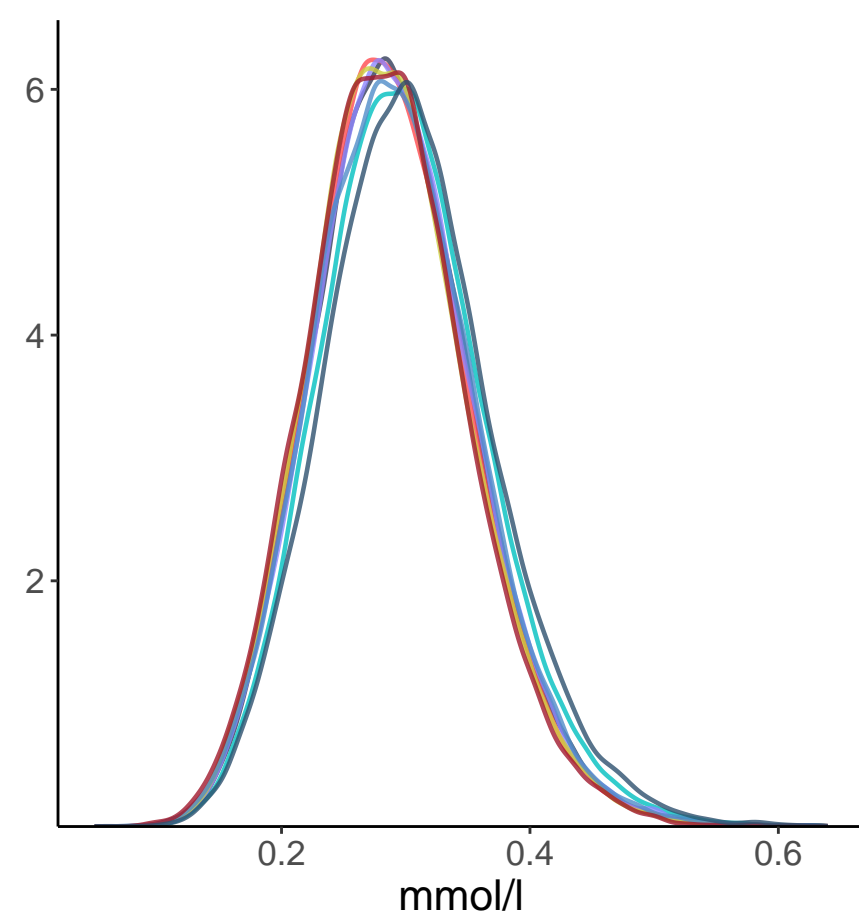
## IDL\_L

Spectrometer



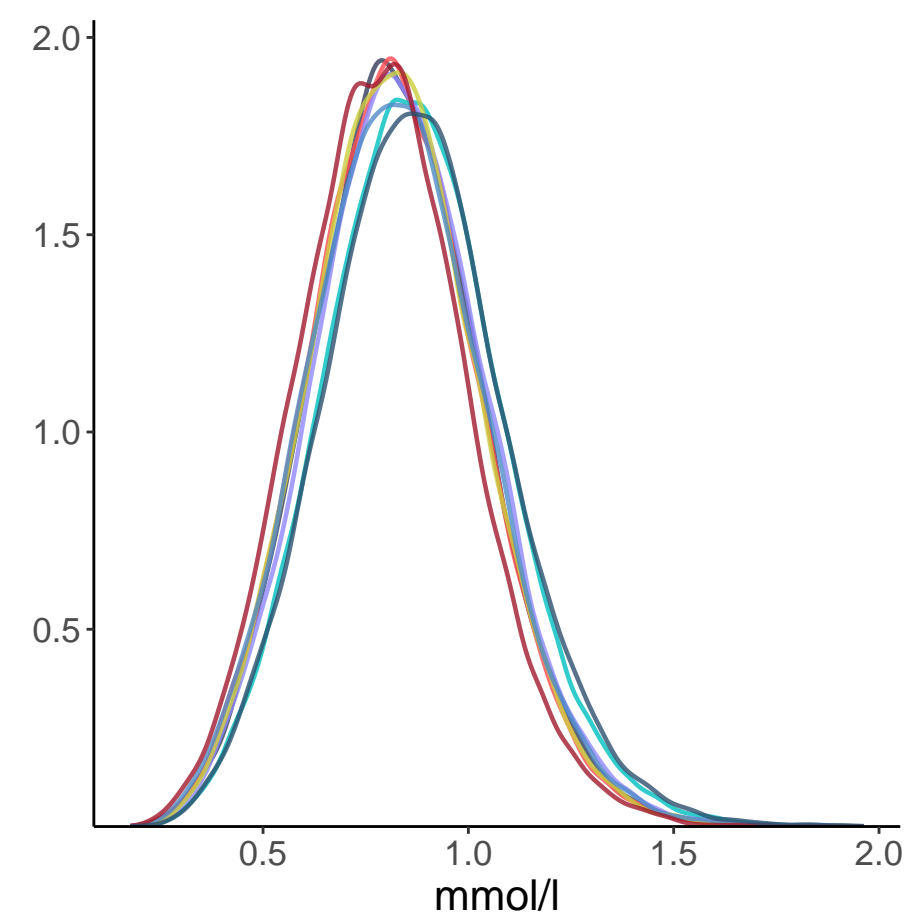
## IDL\_PL

Spectrometer



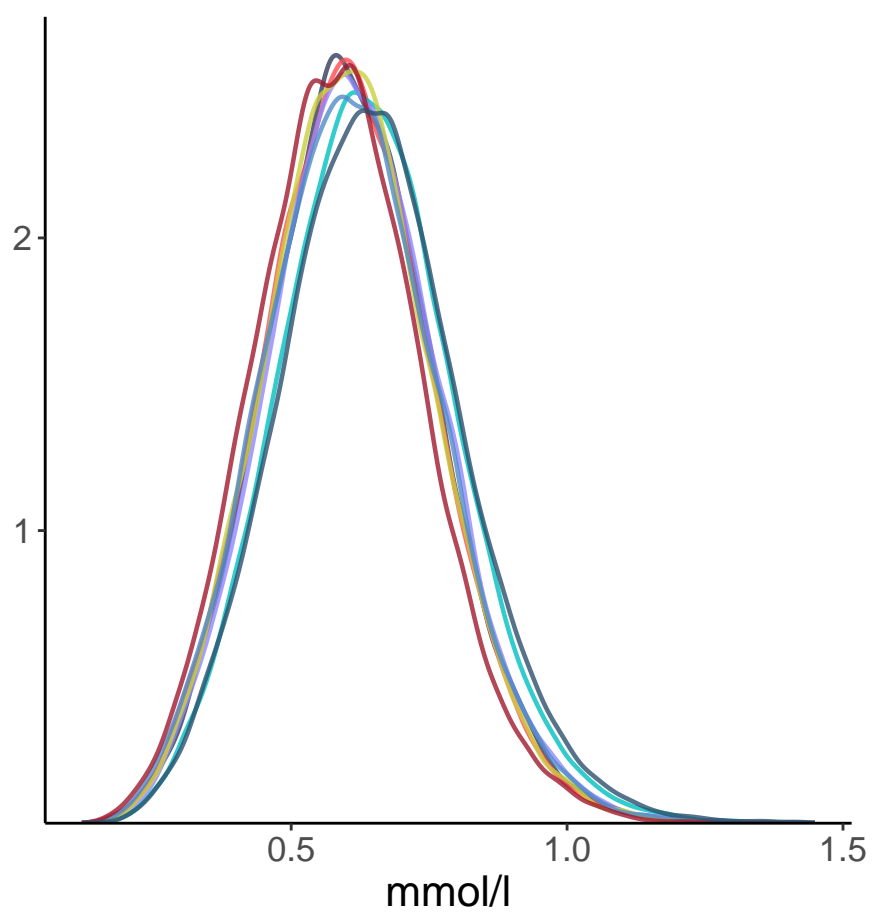
## IDL\_C

Spectrometer



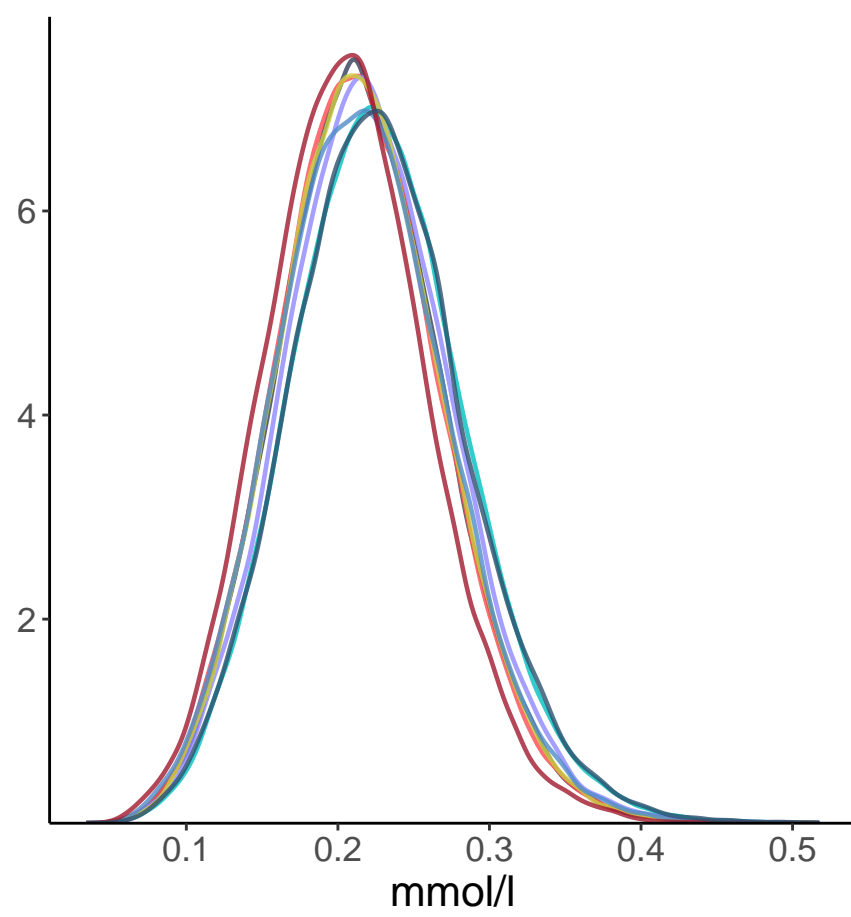
## IDL\_CE

Spectrometer



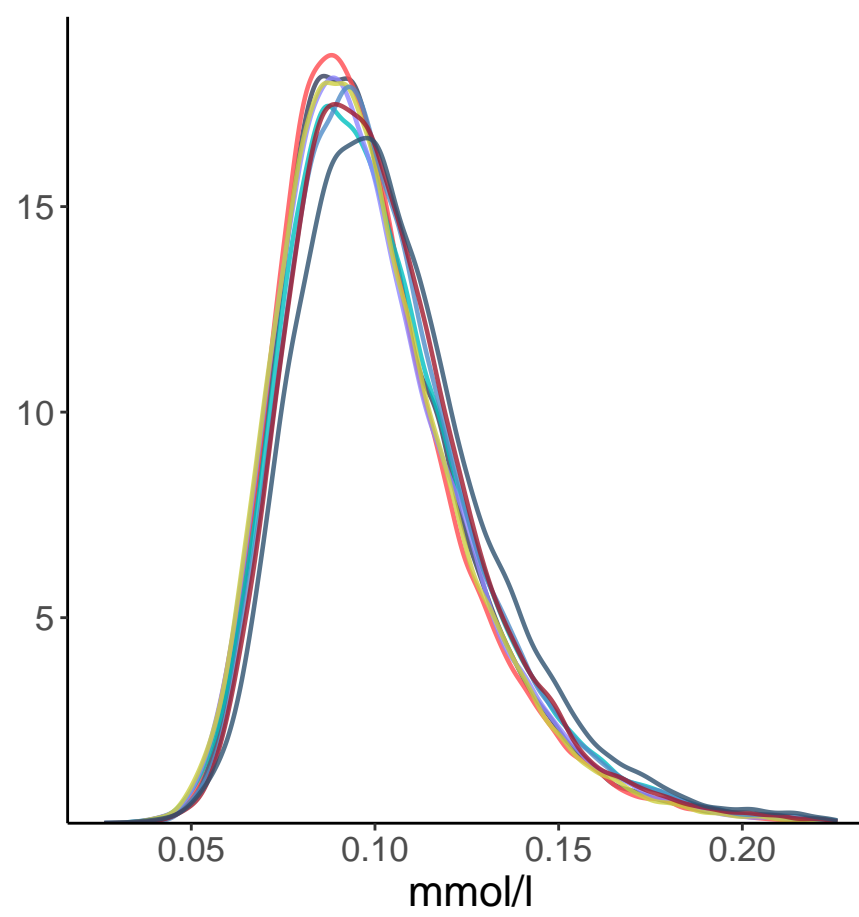
## IDL\_FC

Spectrometer



## IDL\_TG

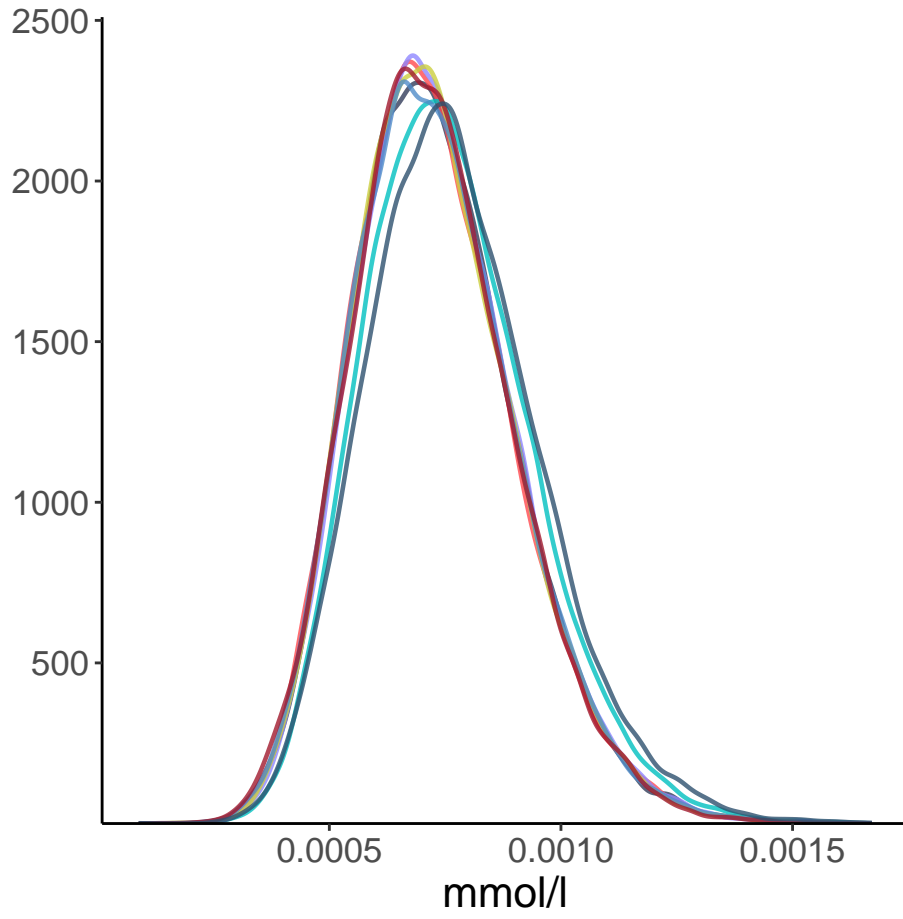
Spectrometer



# Large LDL (average diameter 25.5 nm)

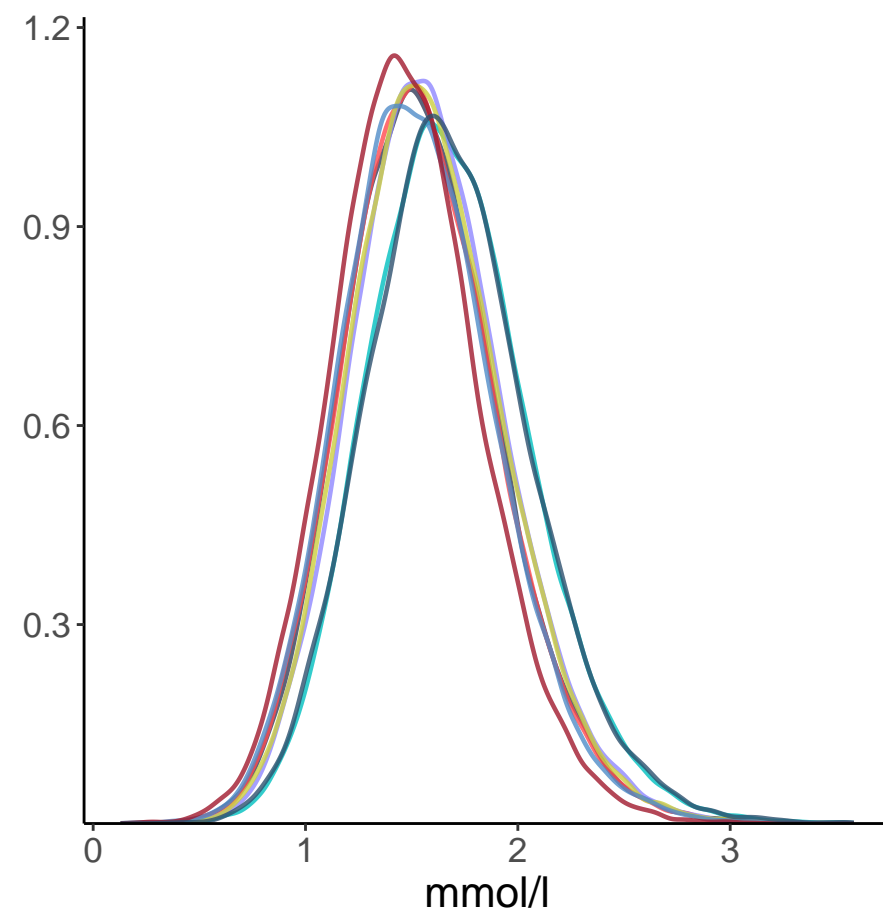
## L\_LDL\_P

Spectrometer



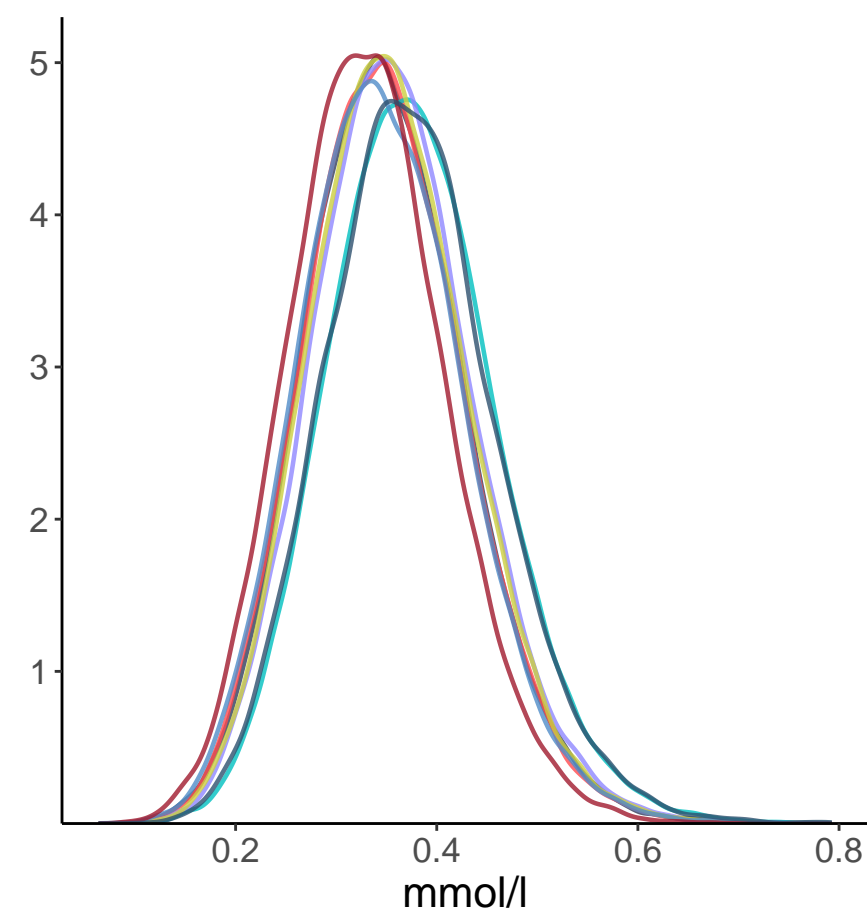
## L\_LDL\_L

Spectrometer



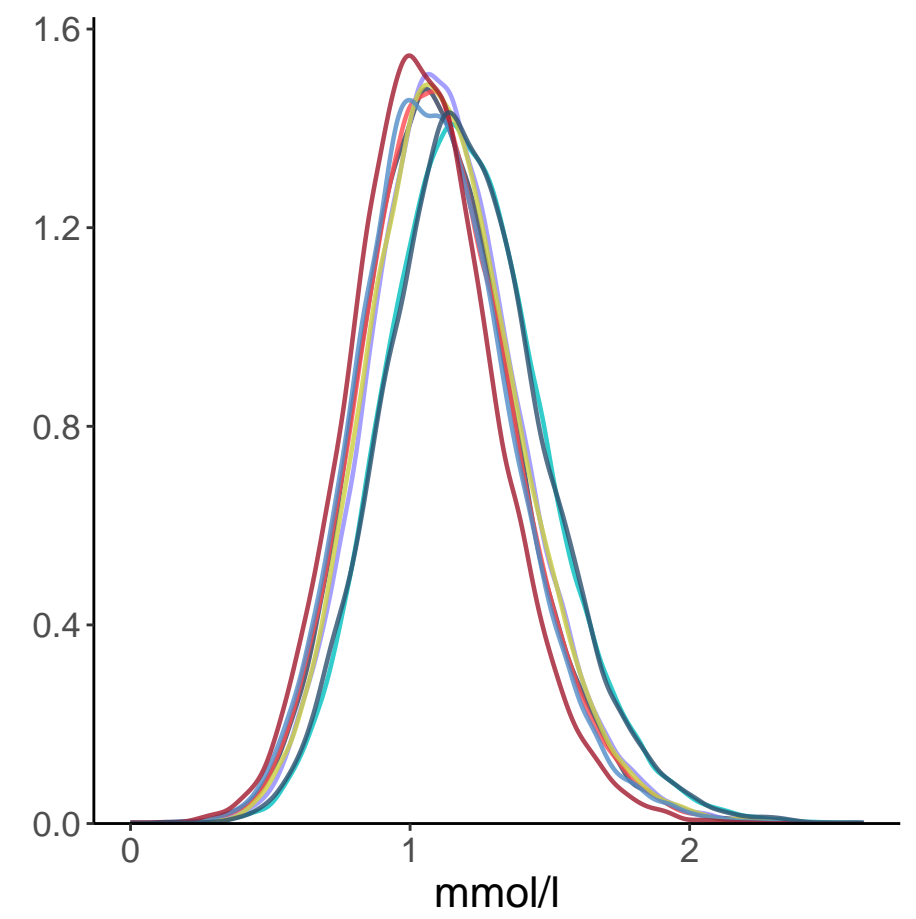
## L\_LDL\_PL

Spectrometer



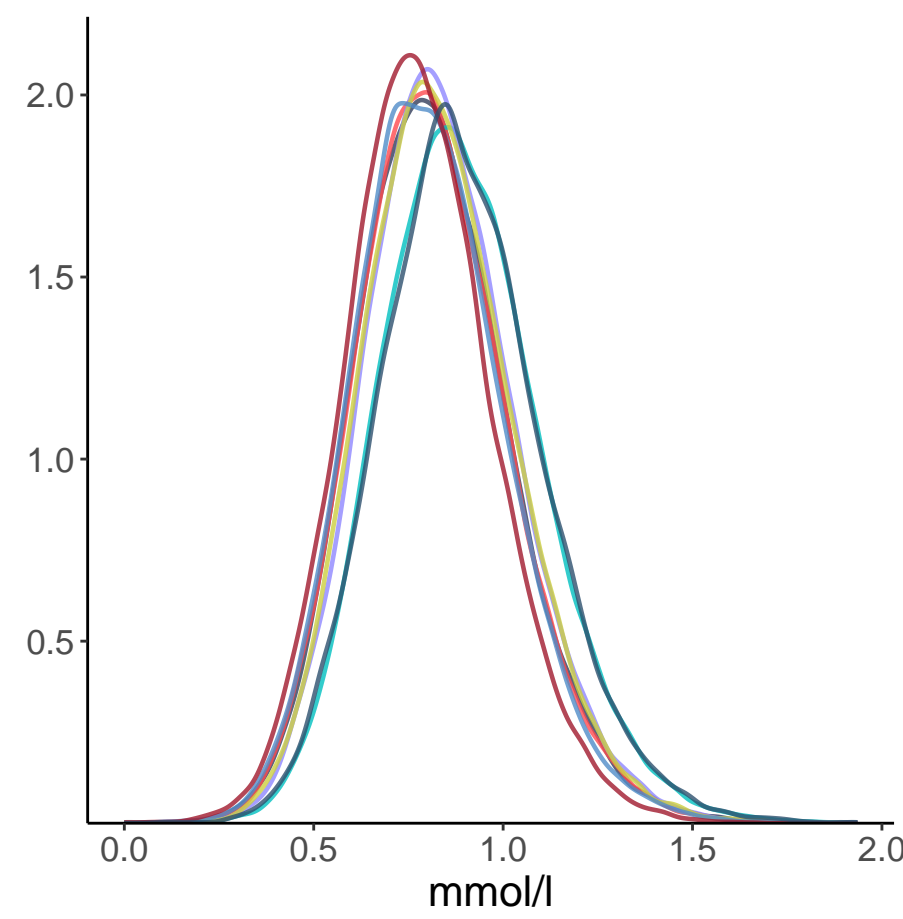
## L\_LDL\_C

Spectrometer



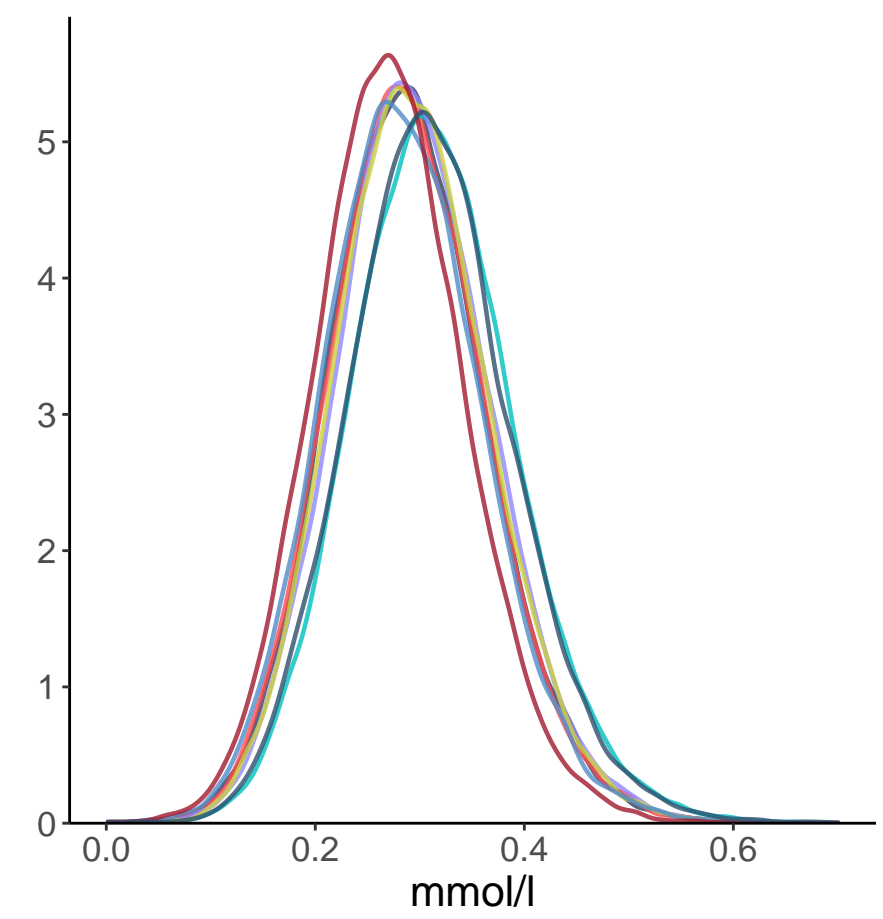
## L\_LDL\_CE

Spectrometer



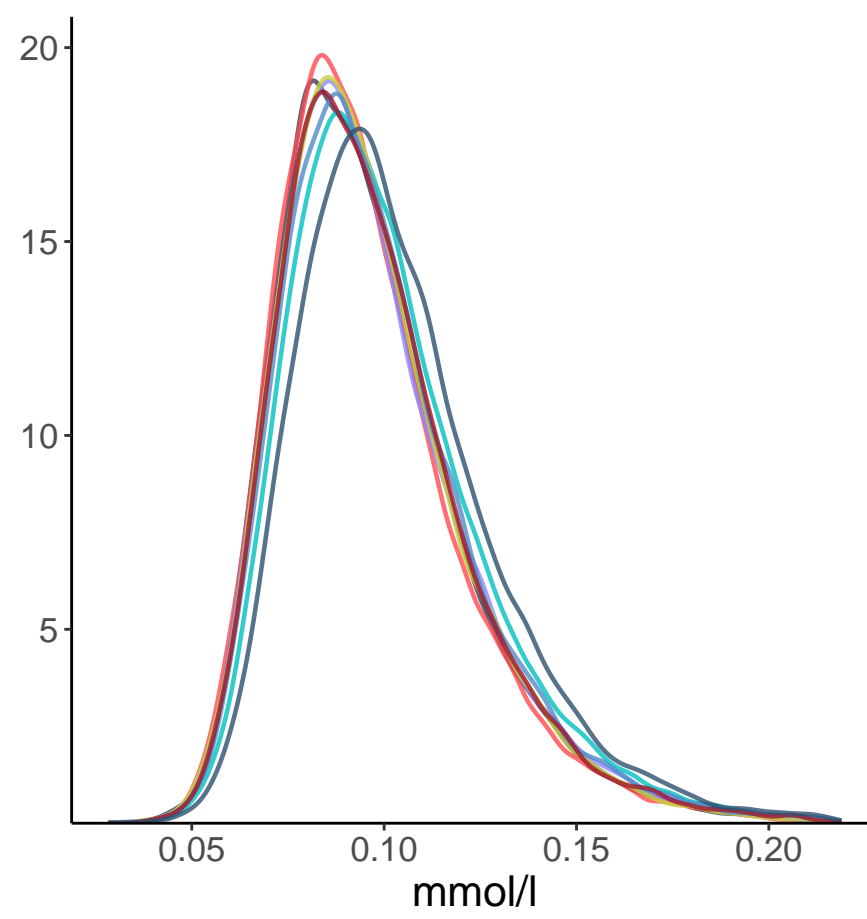
## L\_LDL\_FC

Spectrometer



## L\_LDL\_TG

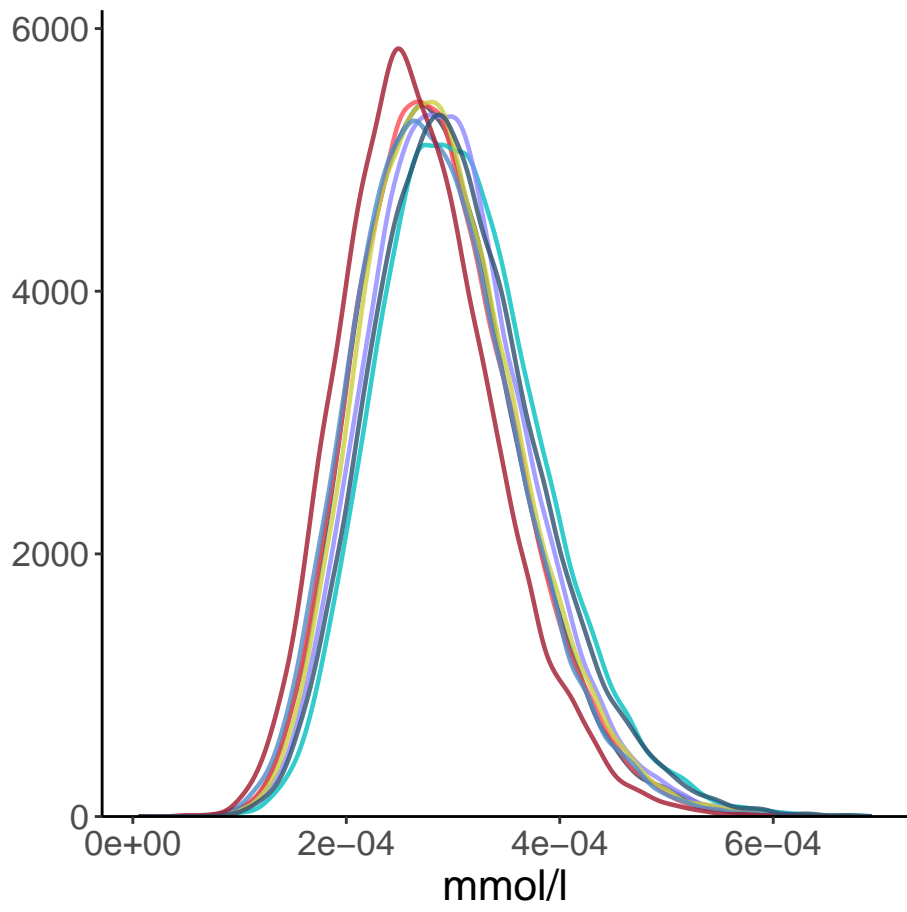
Spectrometer



# Medium LDL (average diameter 23 nm)

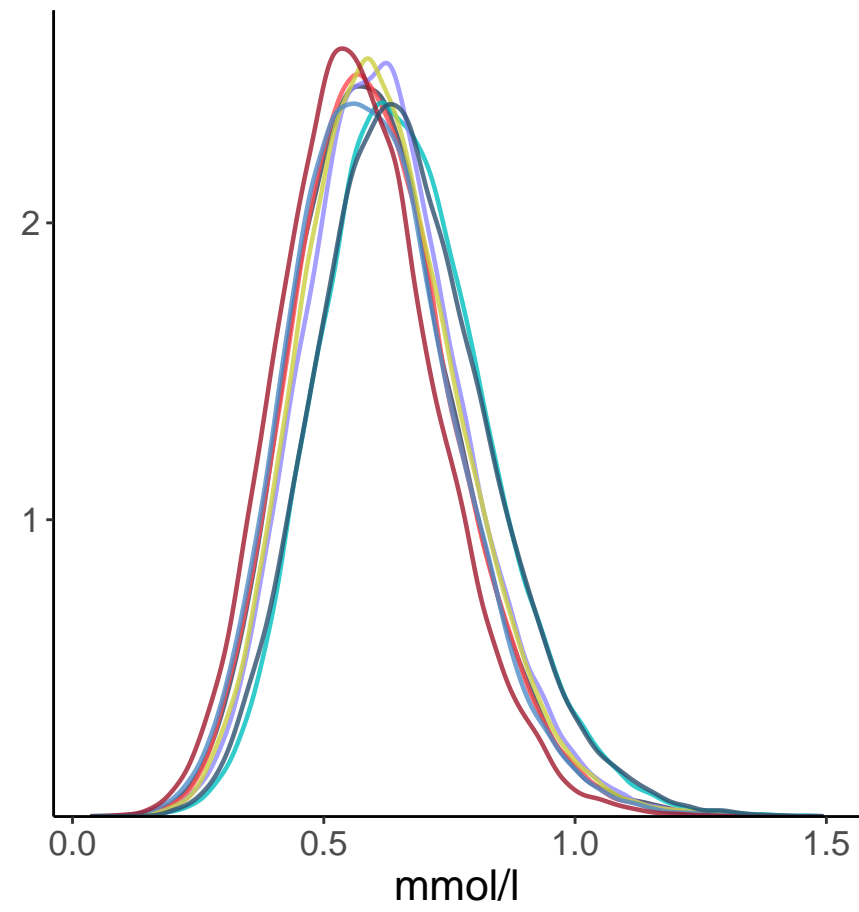
## M\_LDL\_P

Spectrometer



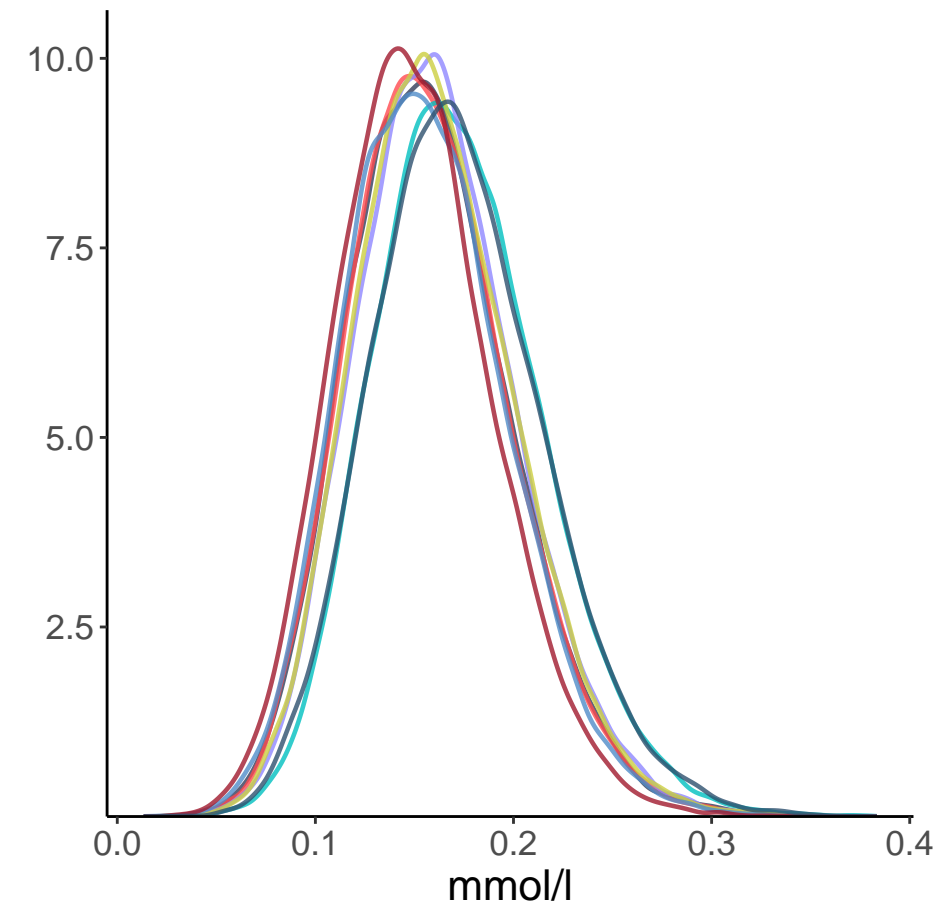
## M\_LDL\_L

Spectrometer



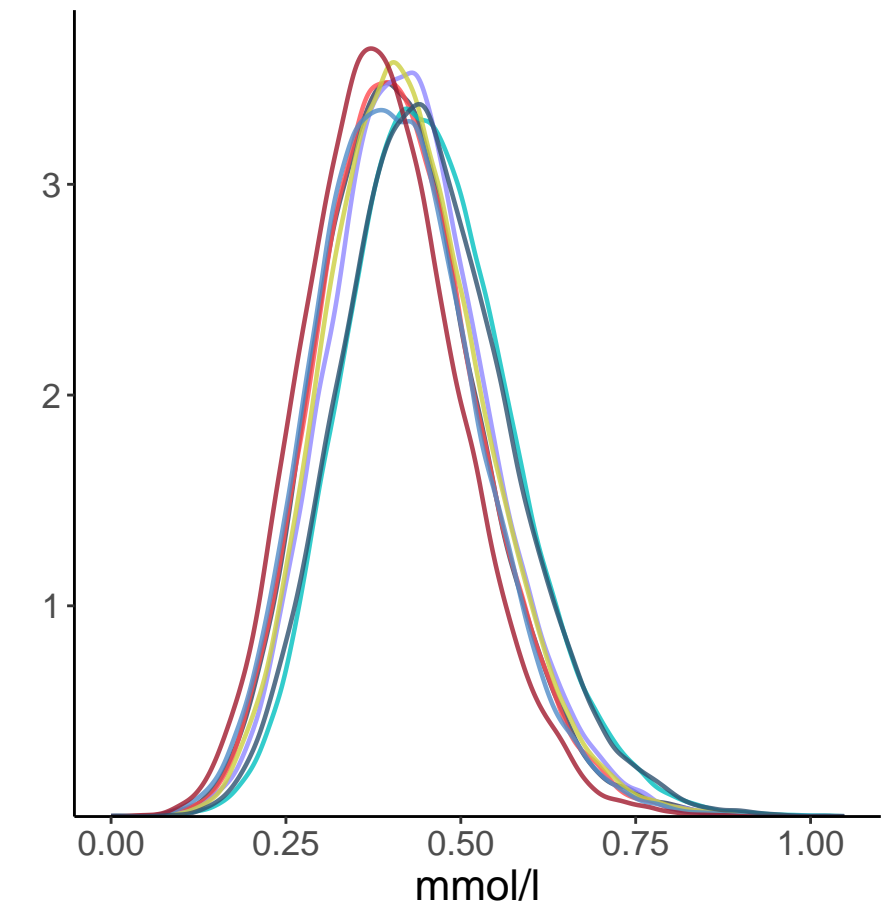
## M\_LDL\_PL

Spectrometer



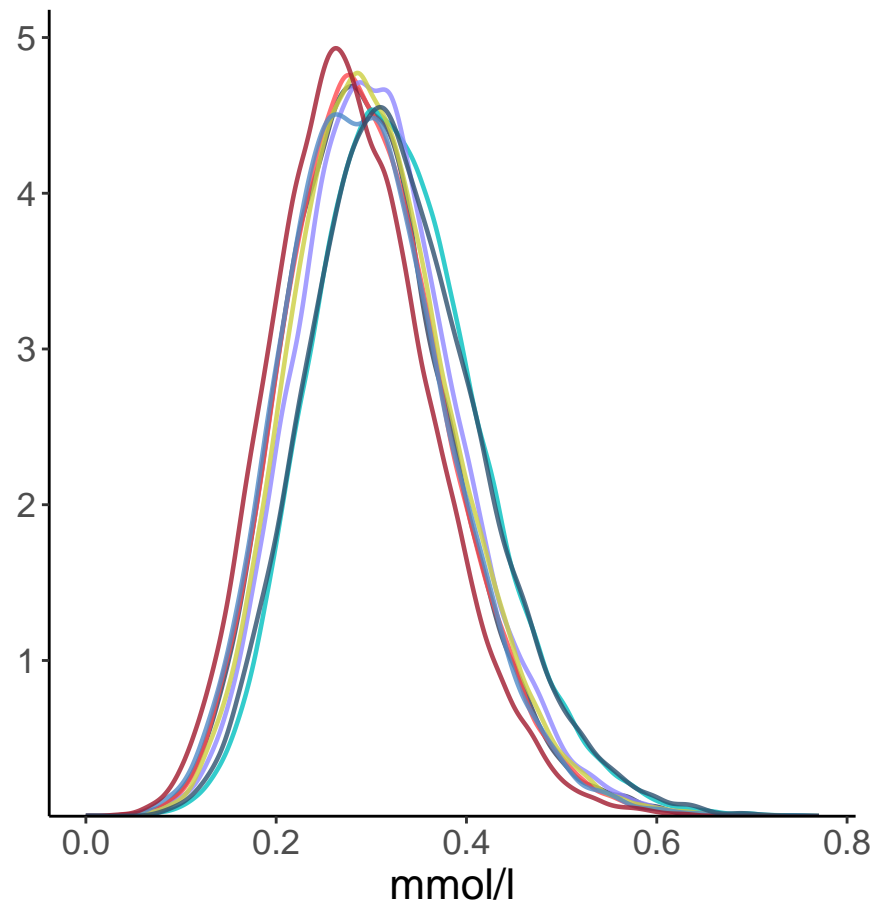
## M\_LDL\_C

Spectrometer



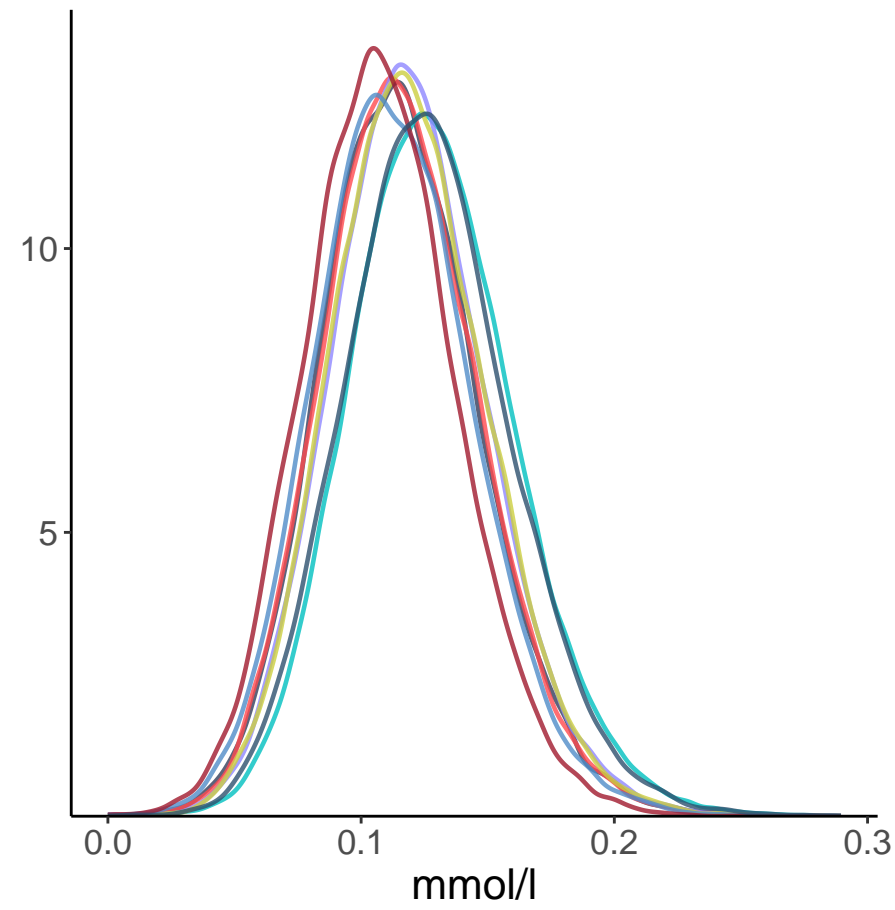
## M\_LDL\_CE

Spectrometer



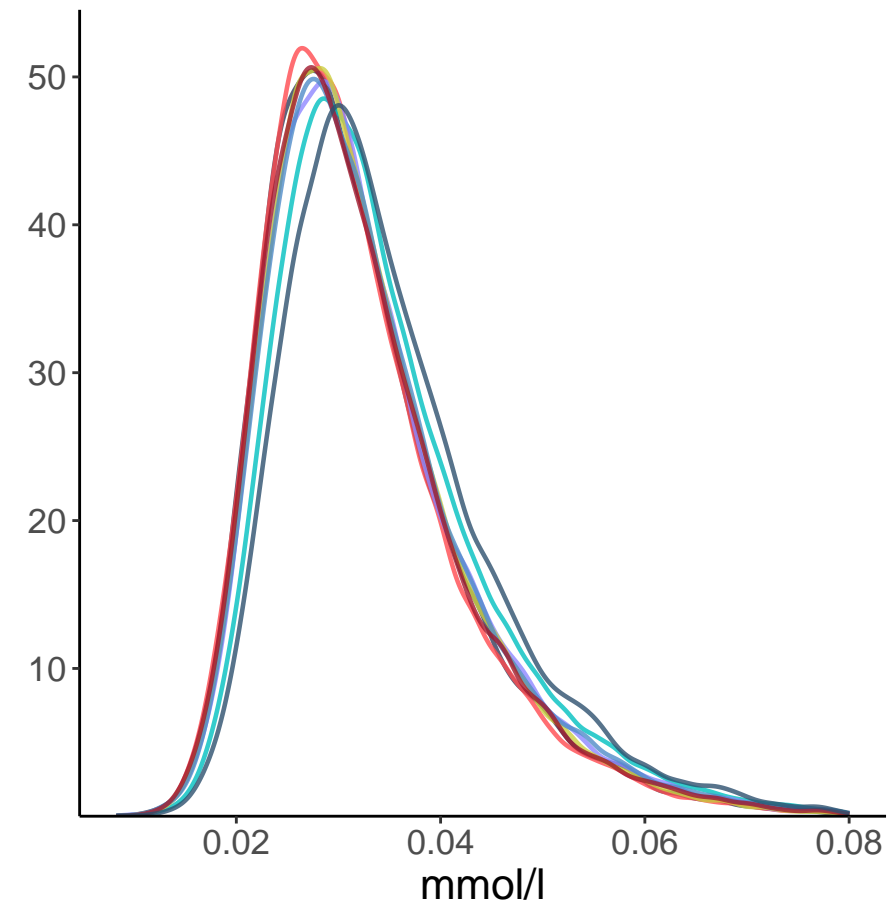
## M\_LDL\_FC

Spectrometer



## M\_LDL\_TG

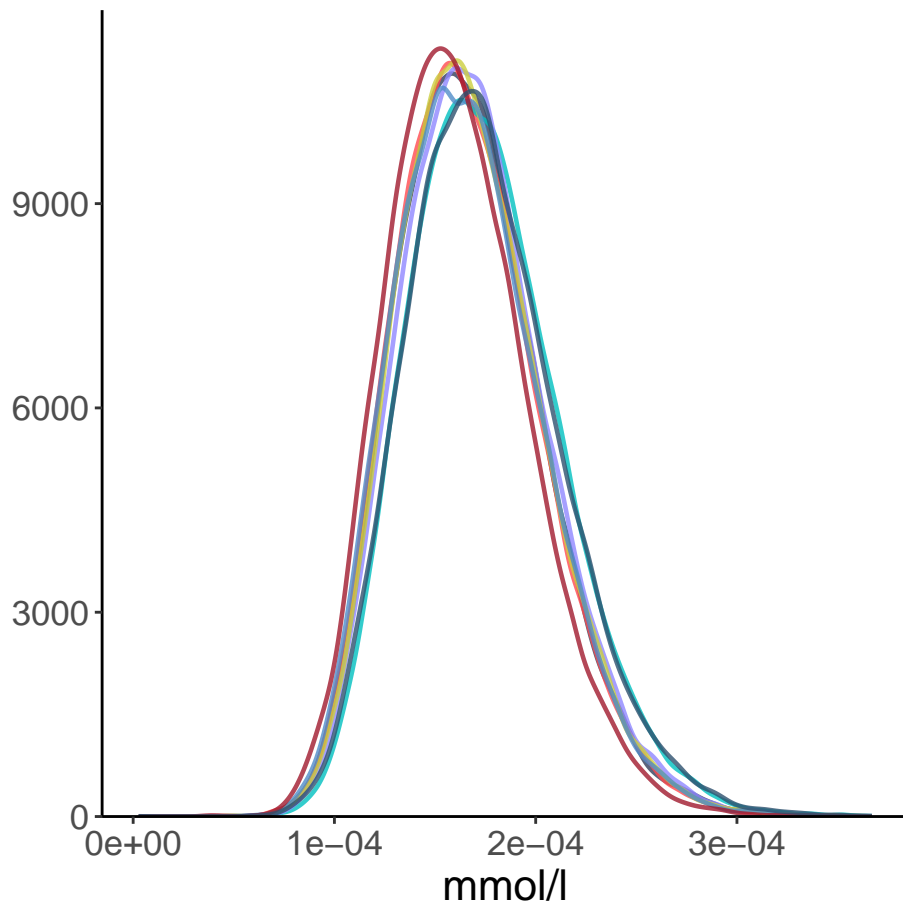
Spectrometer



# Small LDL (average diameter 18.7 nm)

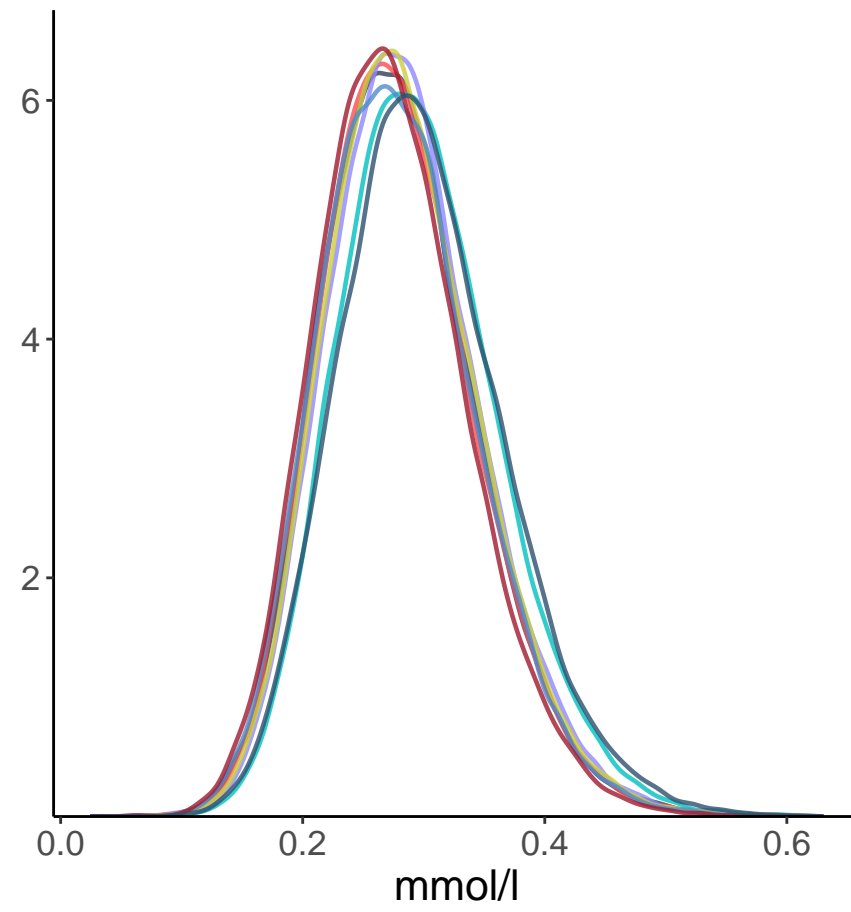
## S\_LDL\_P

Spectrometer



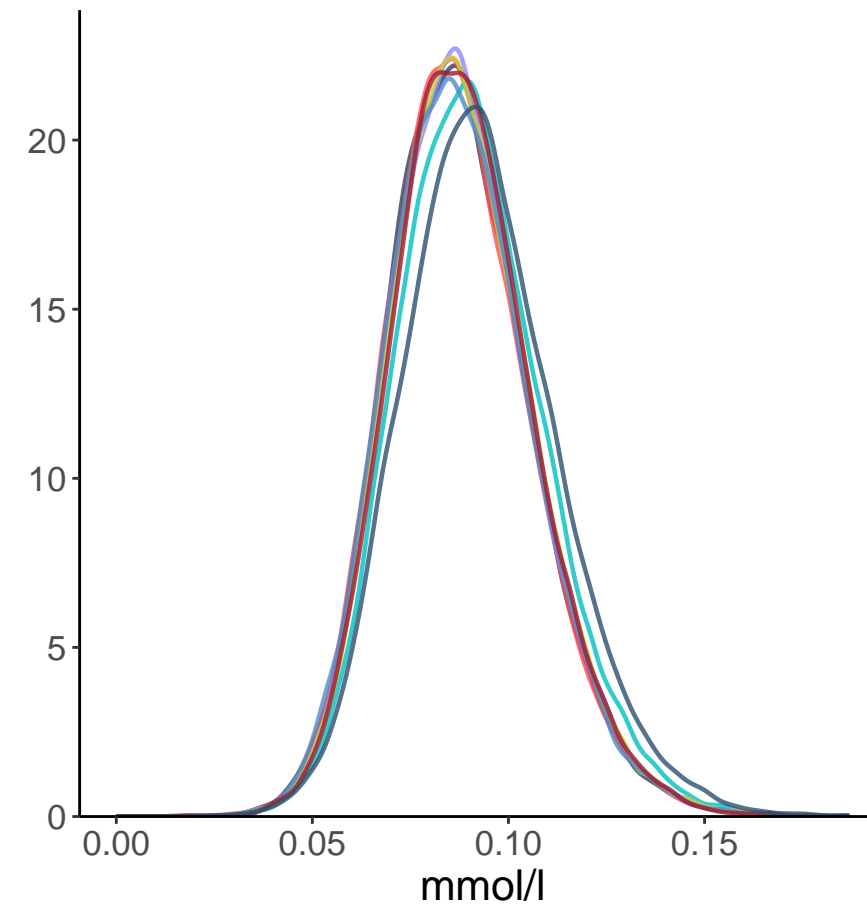
## S\_LDL\_L

Spectrometer



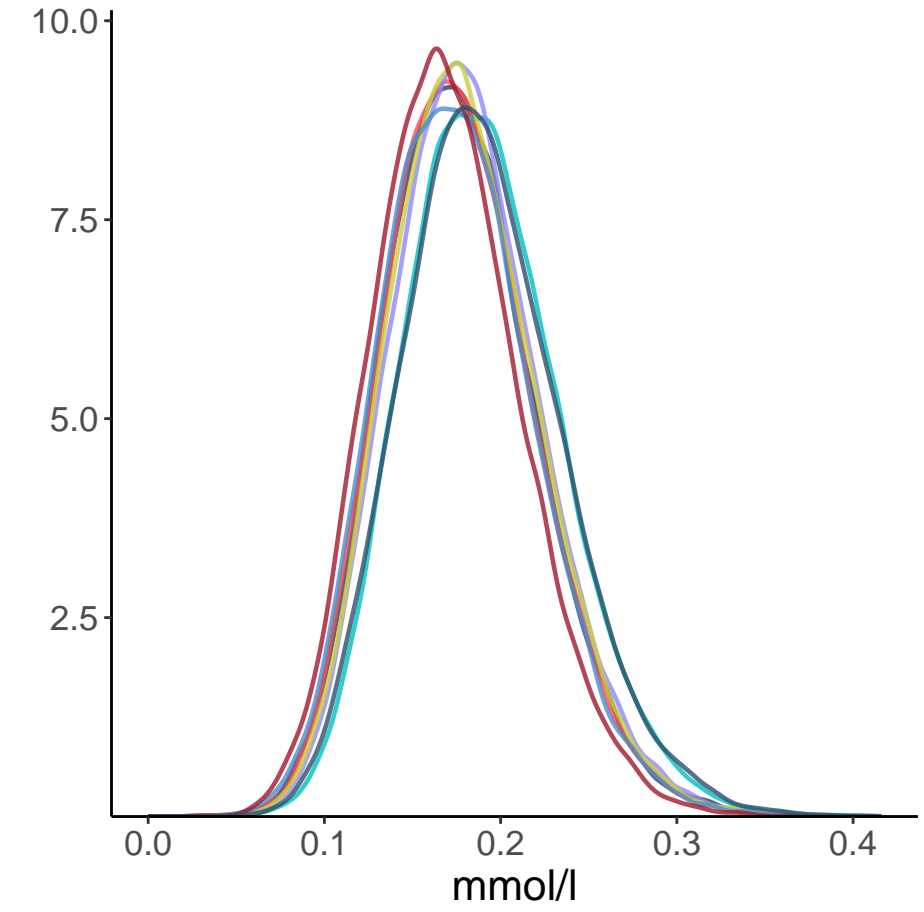
## S\_LDL\_PL

Spectrometer



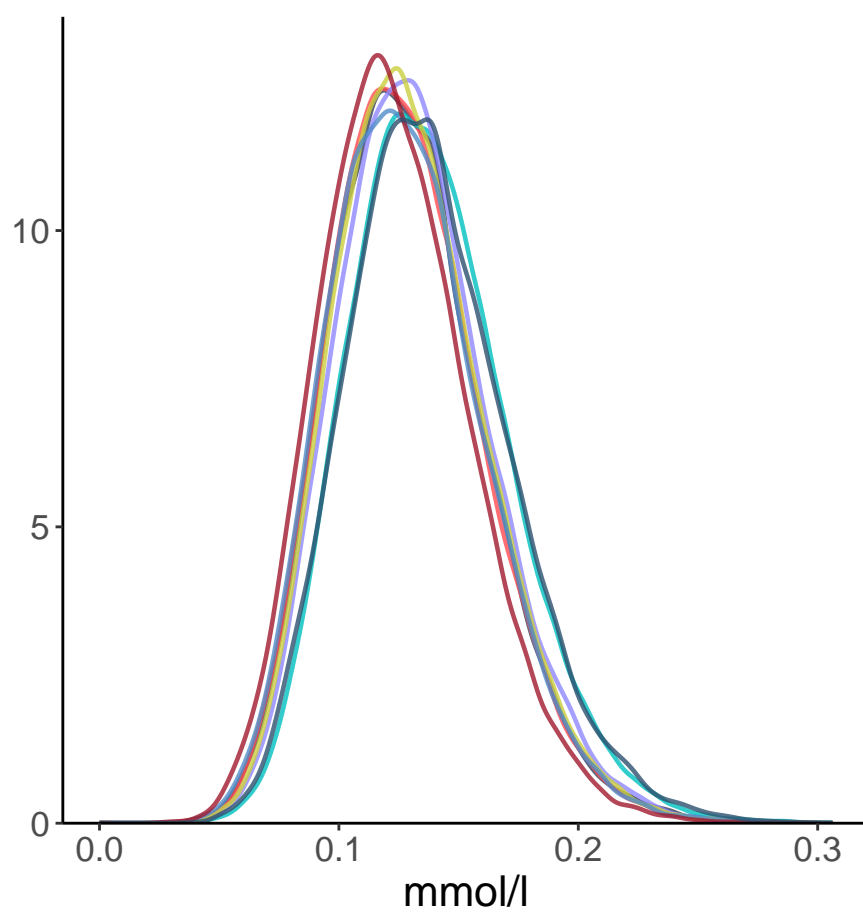
## S\_LDL\_C

Spectrometer



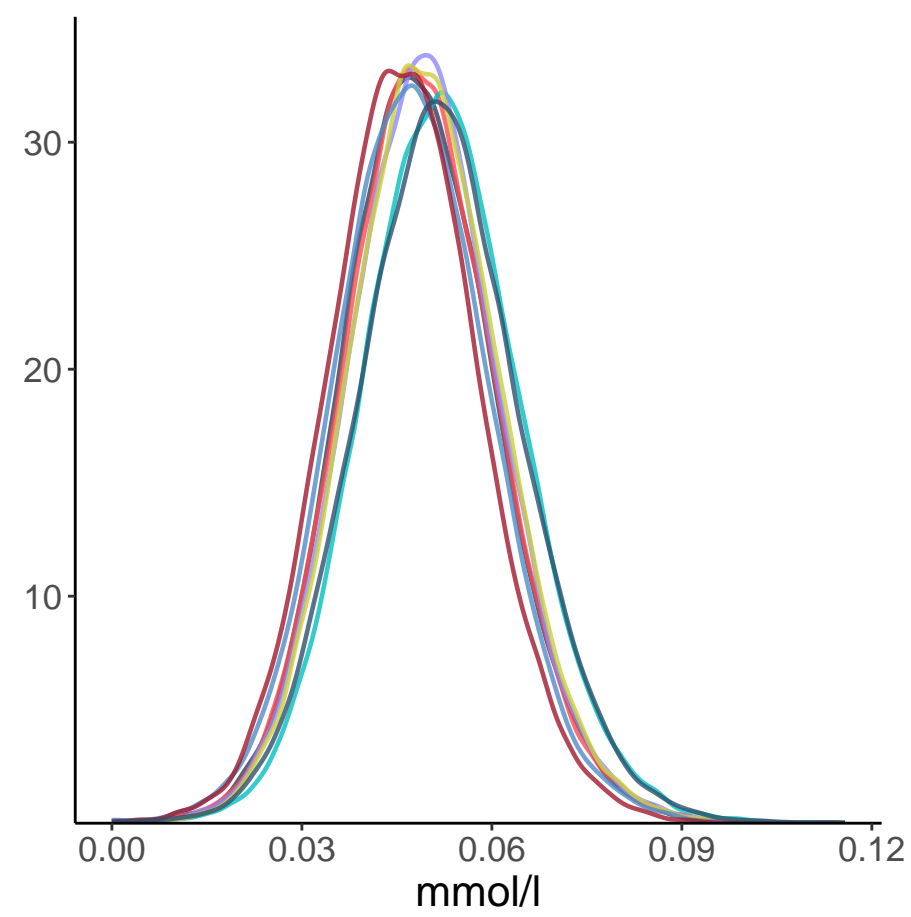
## S\_LDL\_CE

Spectrometer



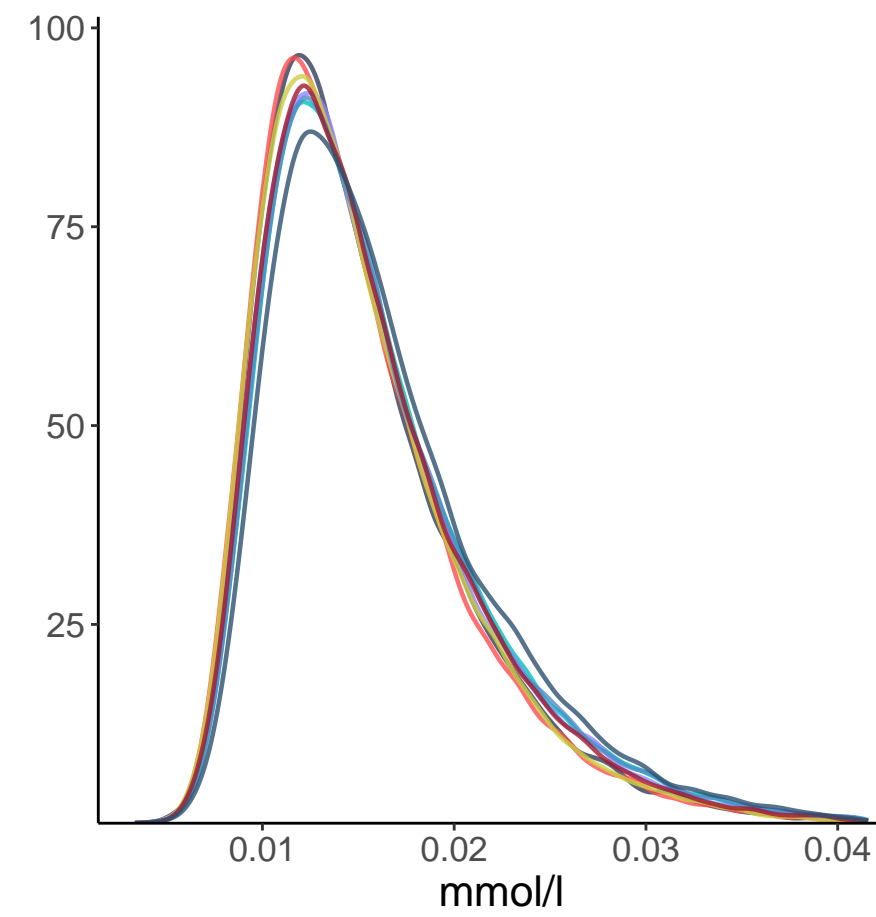
## S\_LDL\_FC

Spectrometer



## S\_LDL\_TG

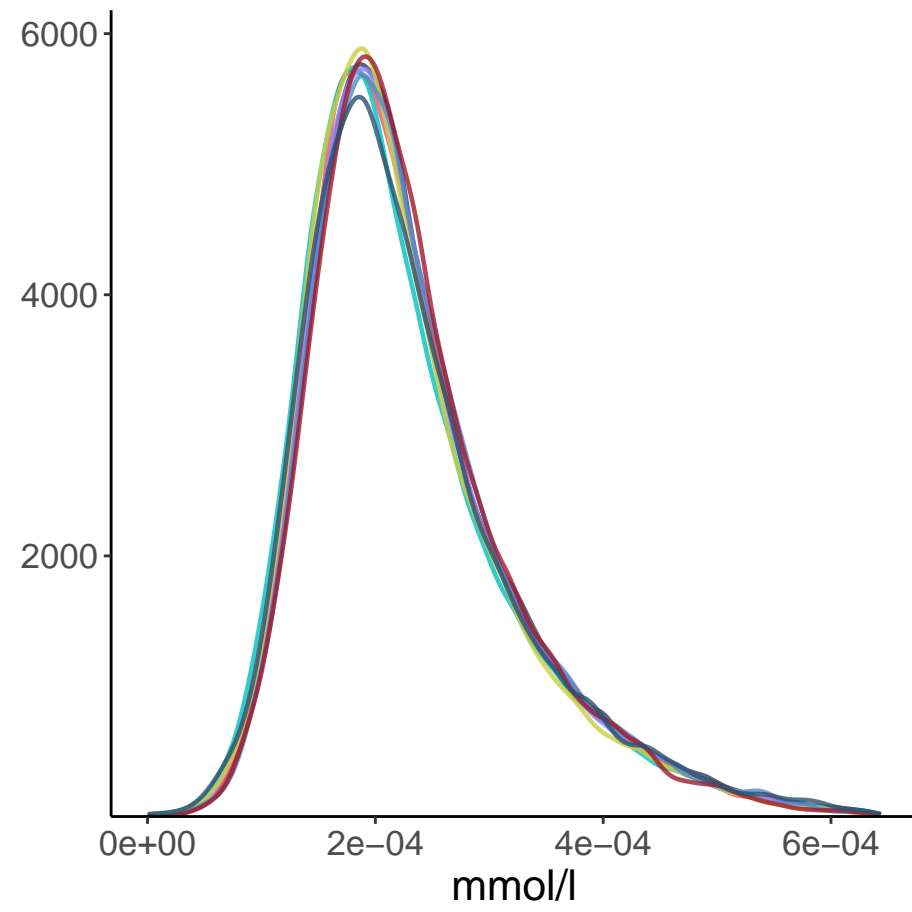
Spectrometer



# Very large HDL (average diameter 14.3 nm)

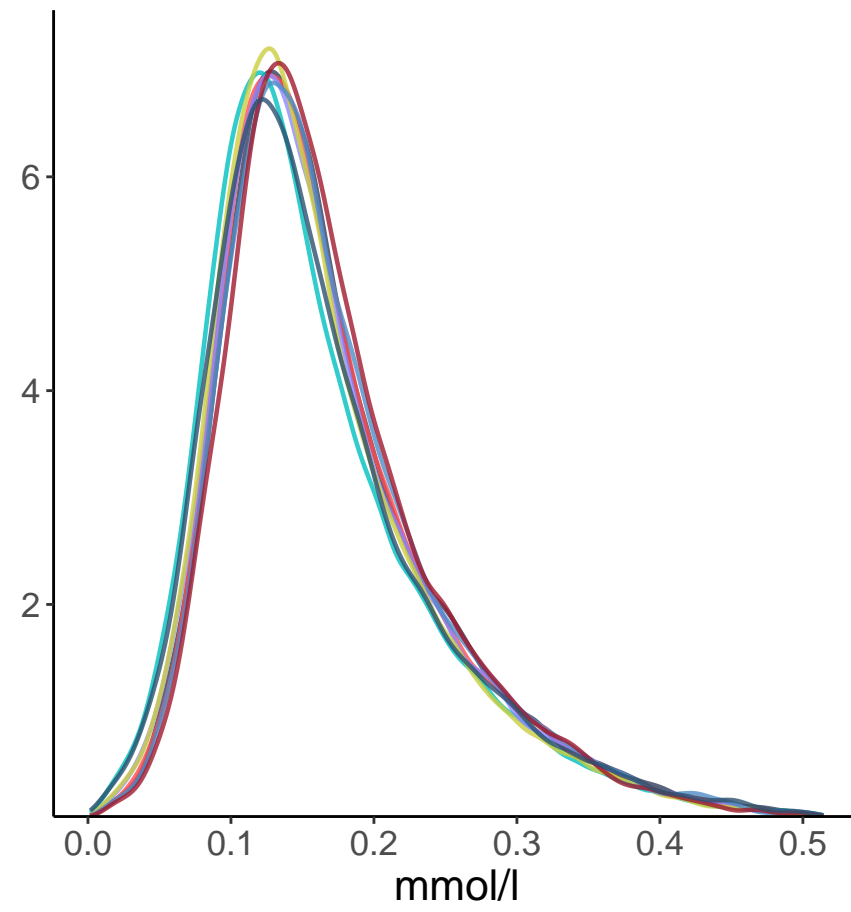
## XL\_HDL\_P

Spectrometer



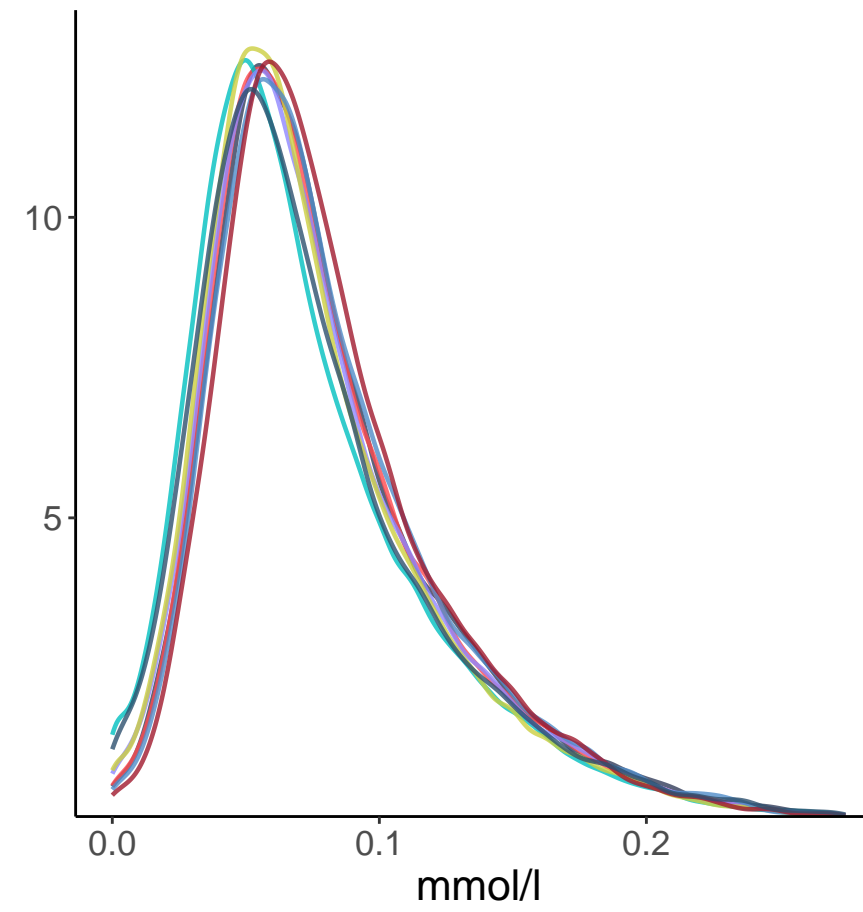
## XL\_HDL\_L

Spectrometer



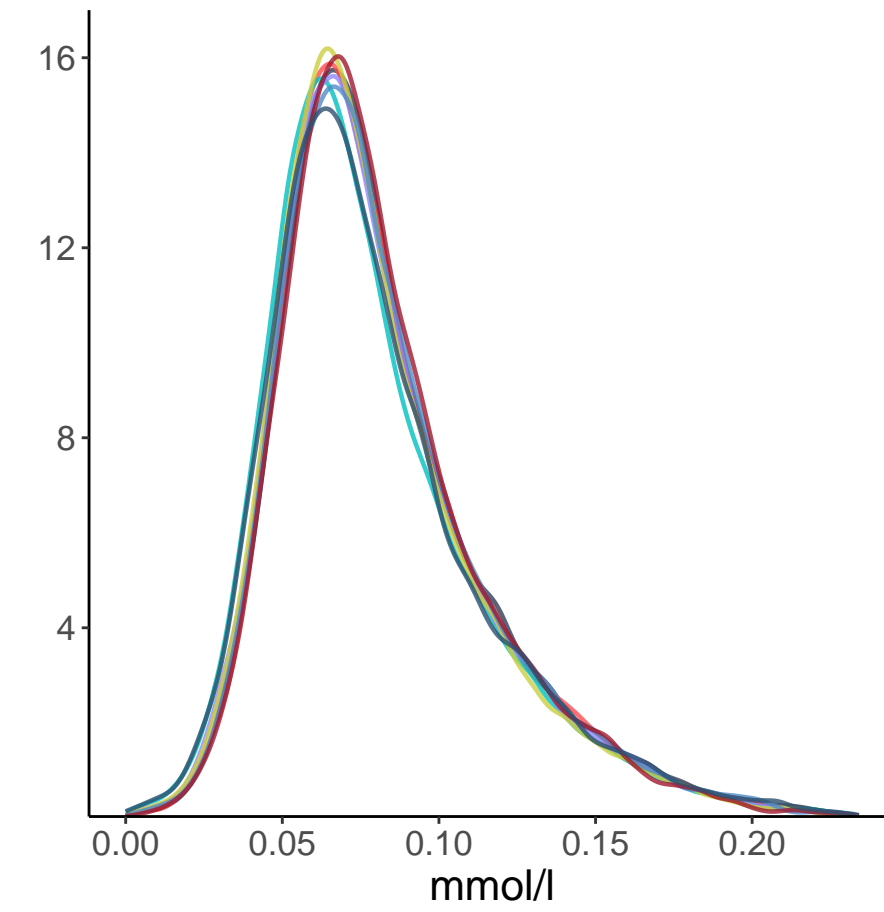
## XL\_HDL\_PL

Spectrometer



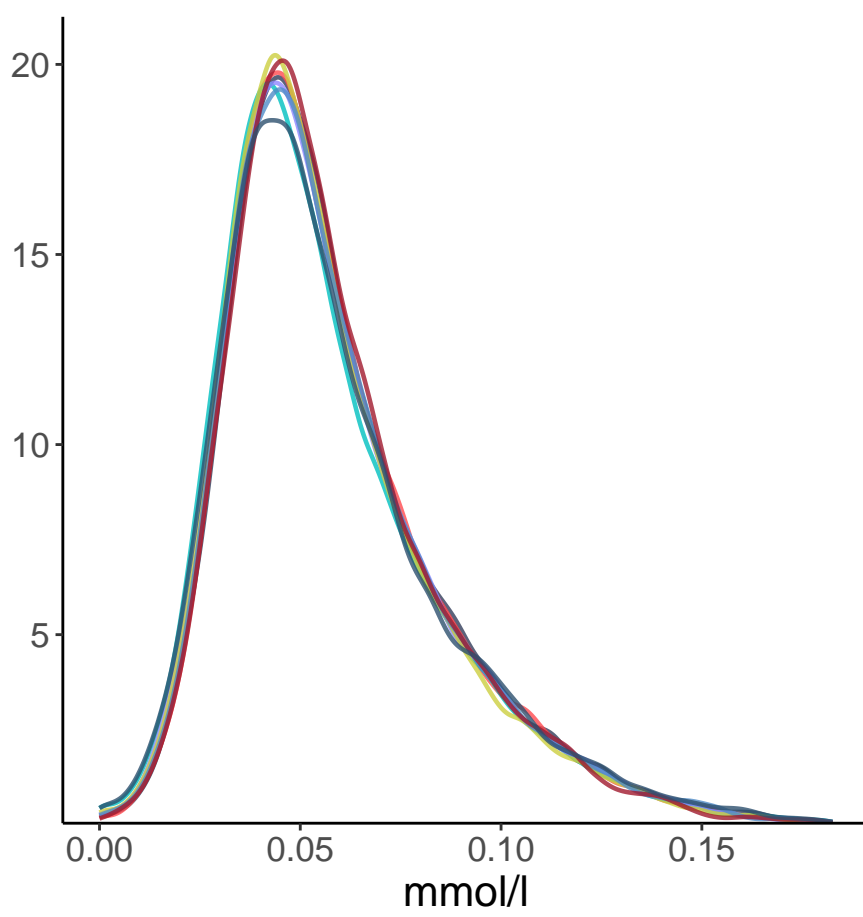
## XL\_HDL\_C

Spectrometer



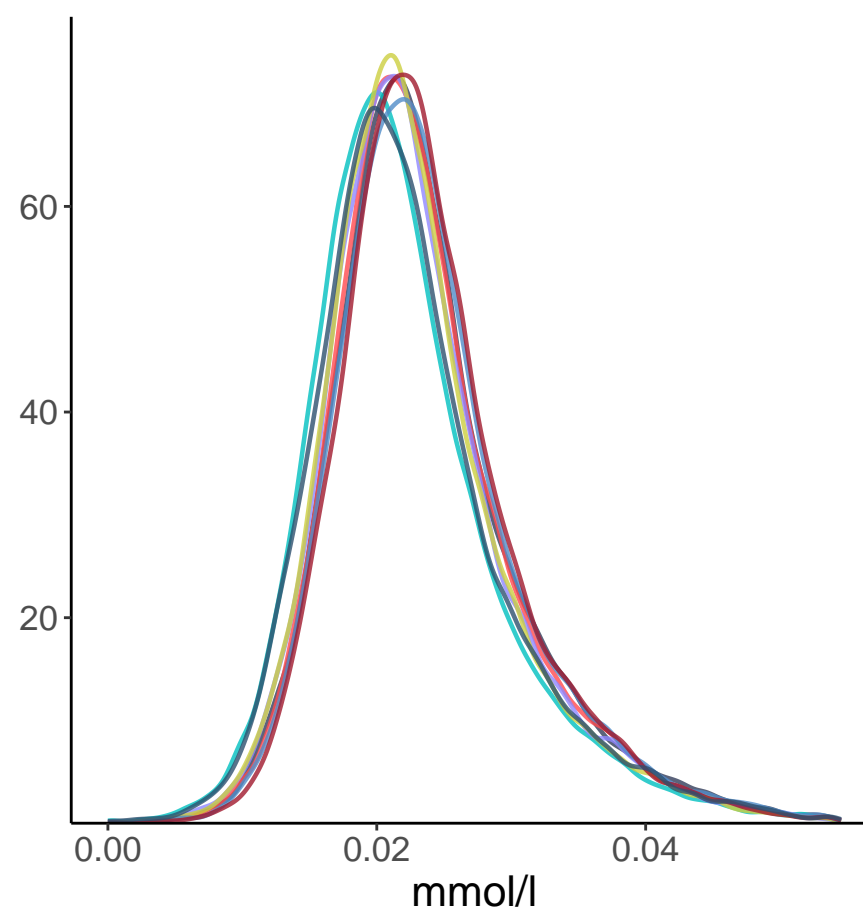
## XL\_HDL\_CE

Spectrometer



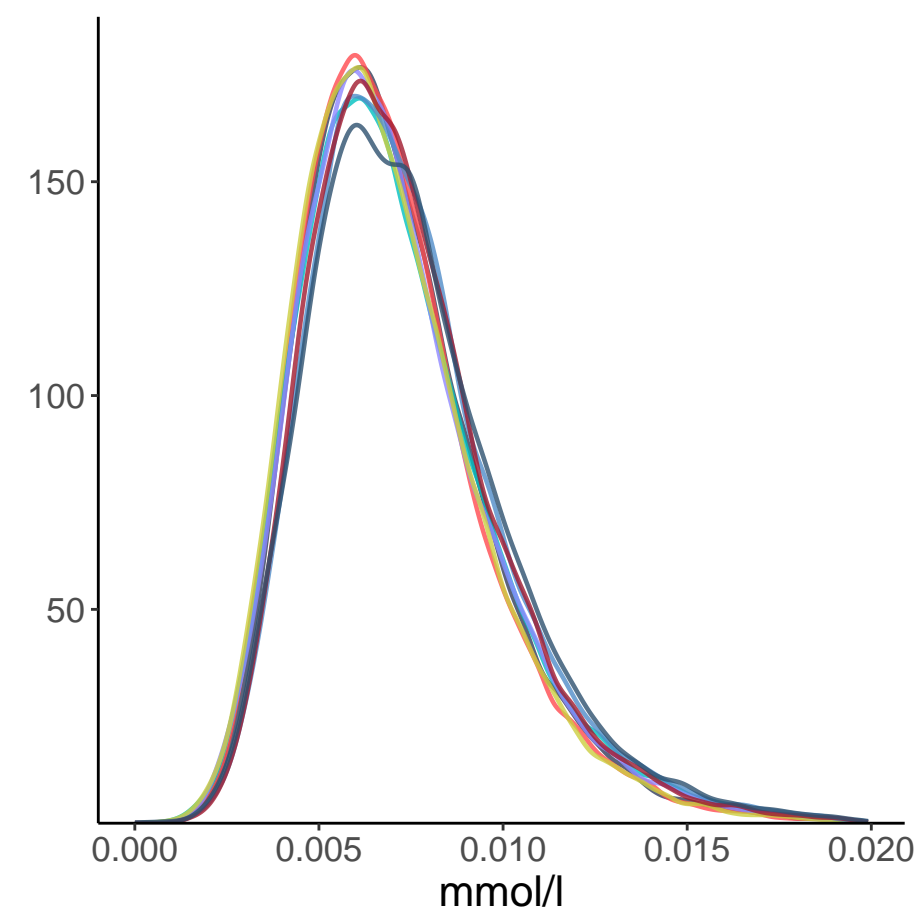
## XL\_HDL\_FC

Spectrometer



## XL\_HDL\_TG

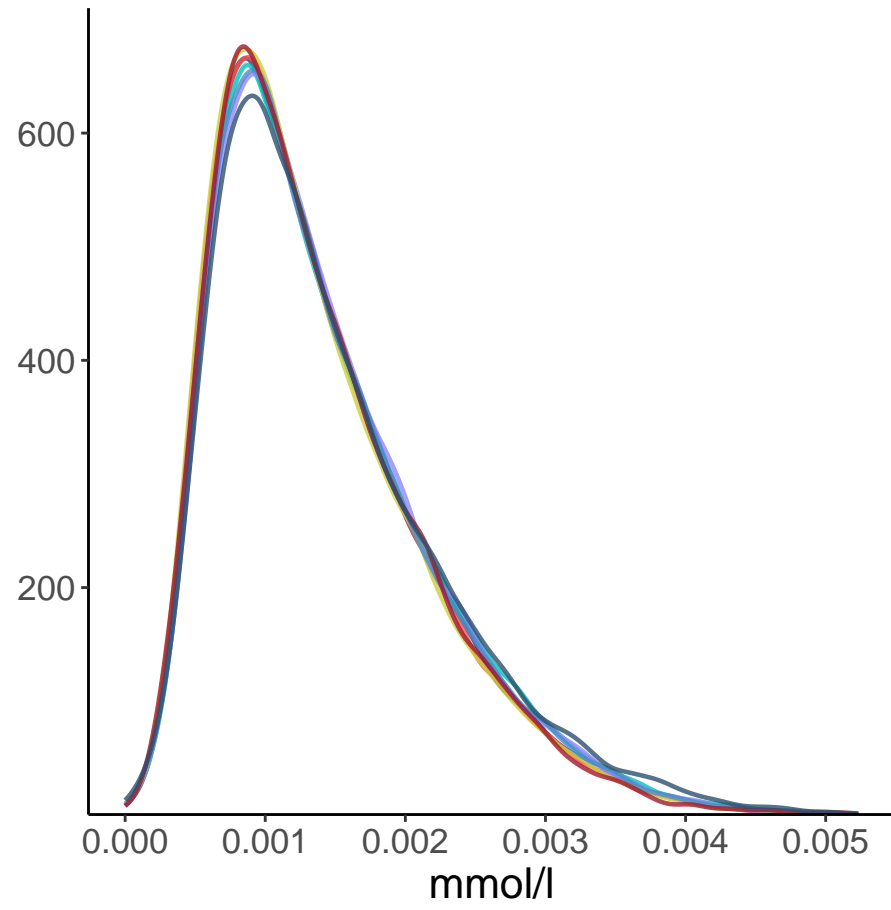
Spectrometer



# Large HDL (average diameter 12.1 nm)

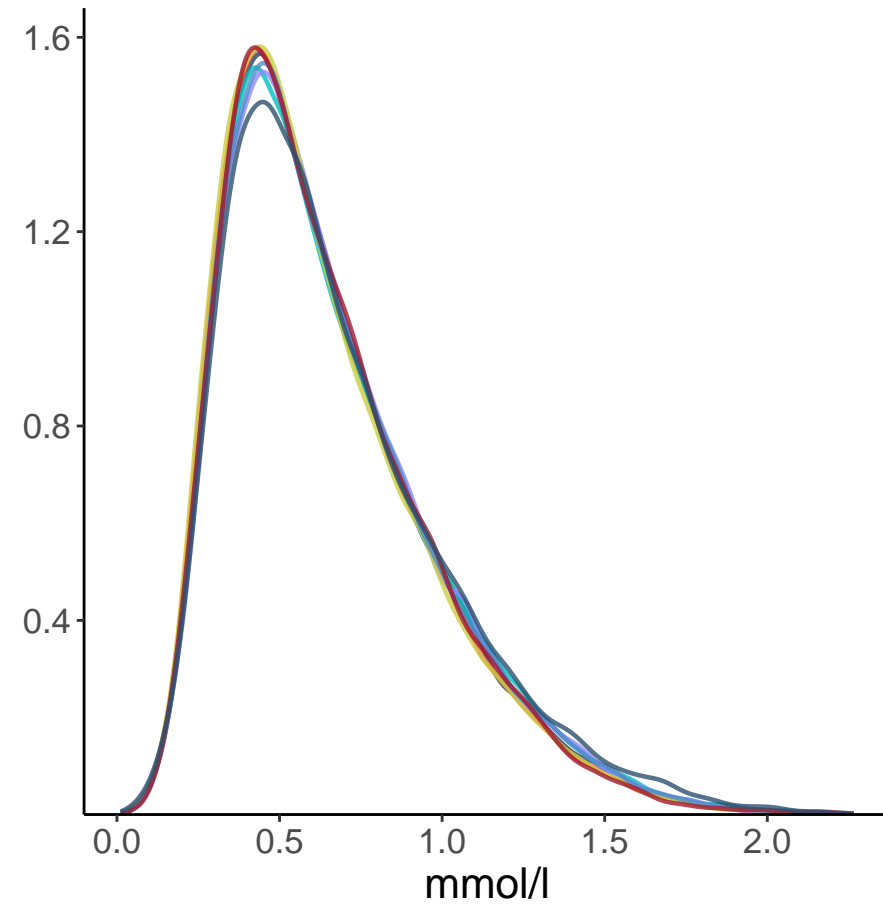
## L\_HDL\_P

Spectrometer



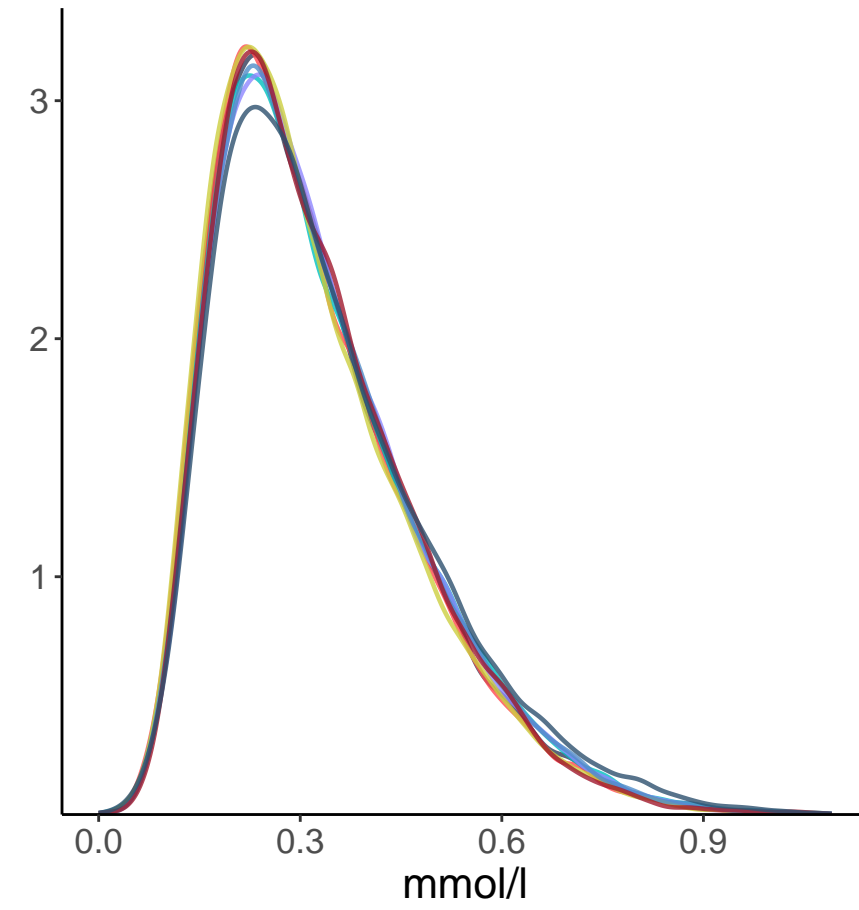
## L\_HDL\_L

Spectrometer



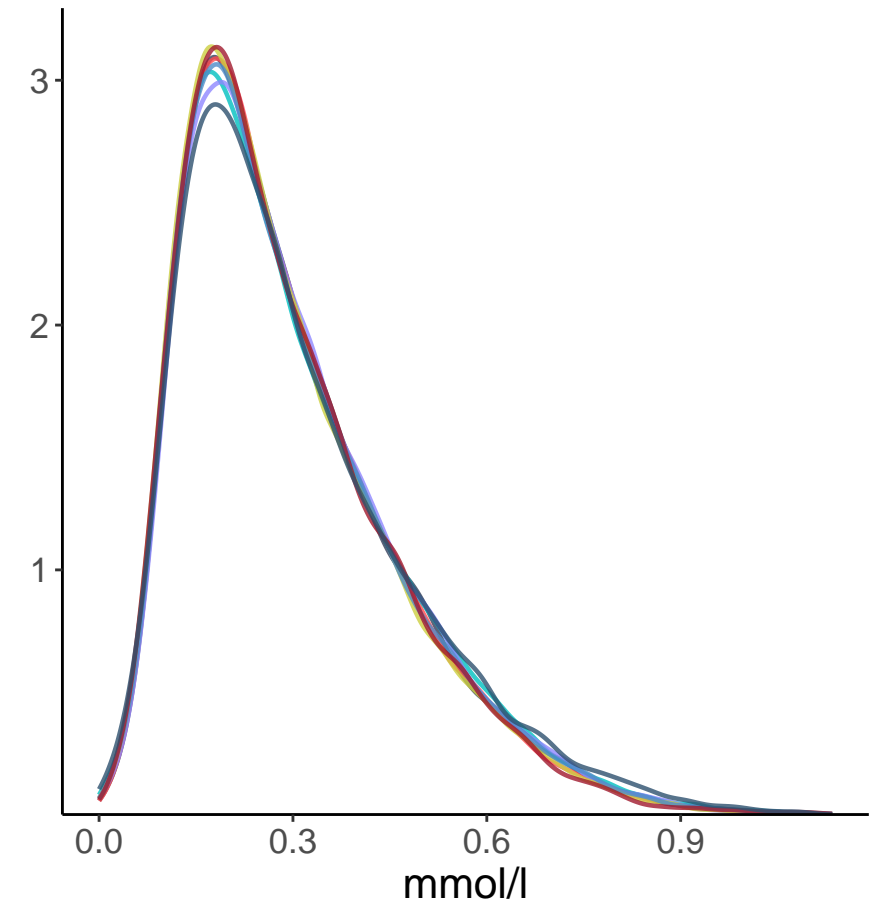
## L\_HDL\_PL

Spectrometer



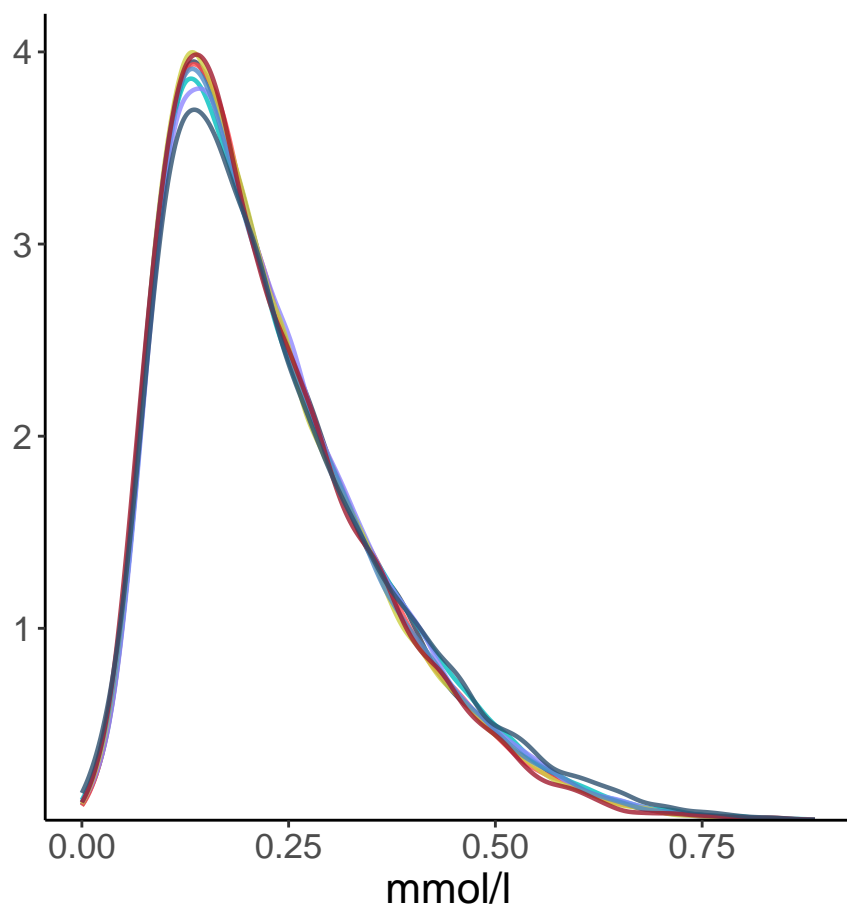
## L\_HDL\_C

Spectrometer



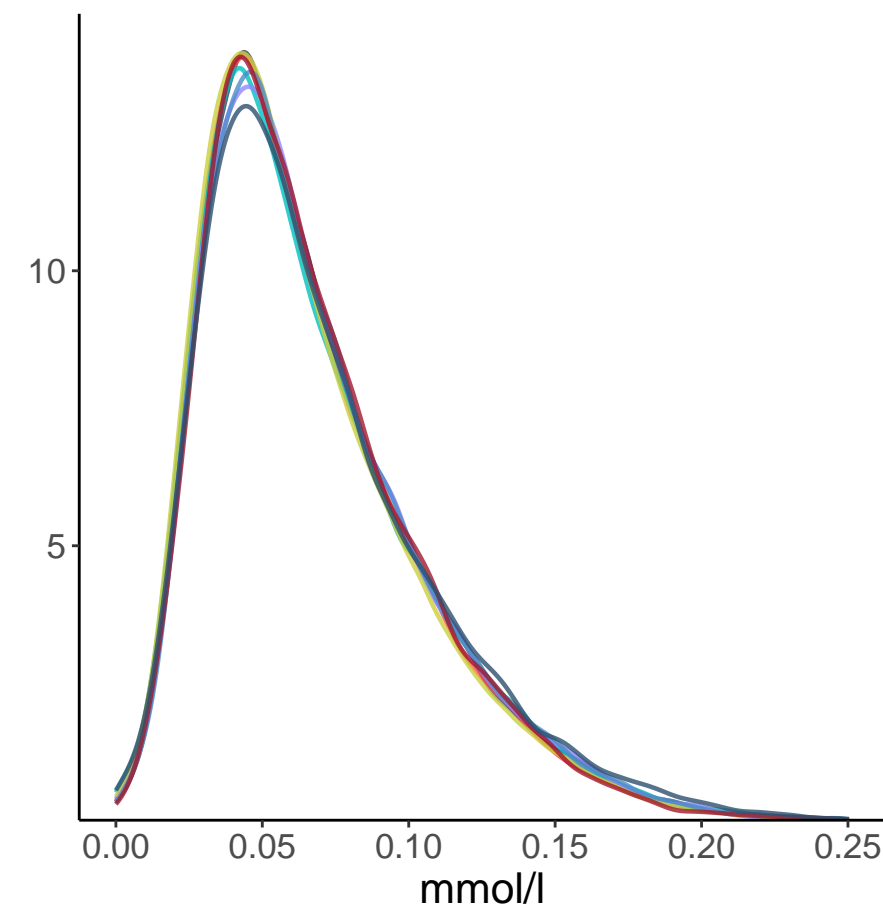
## L\_HDL\_CE

Spectrometer



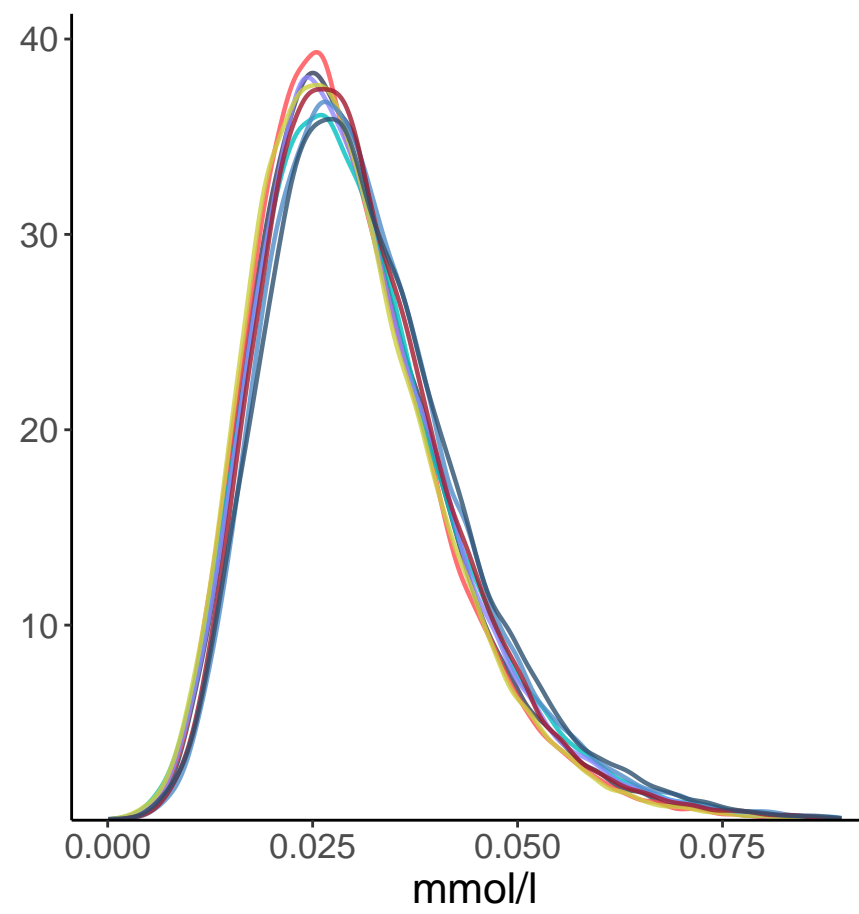
## L\_HDL\_FC

Spectrometer



## L\_HDL\_TG

Spectrometer

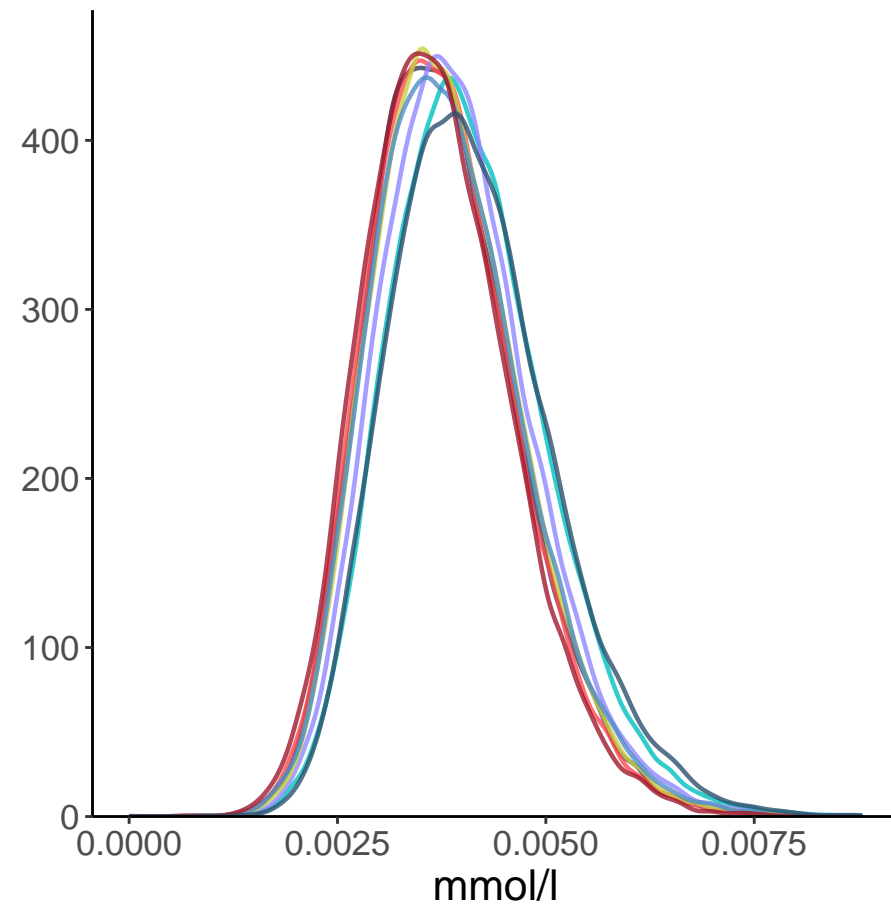




# Medium HDL (average diameter 10.9 nm)

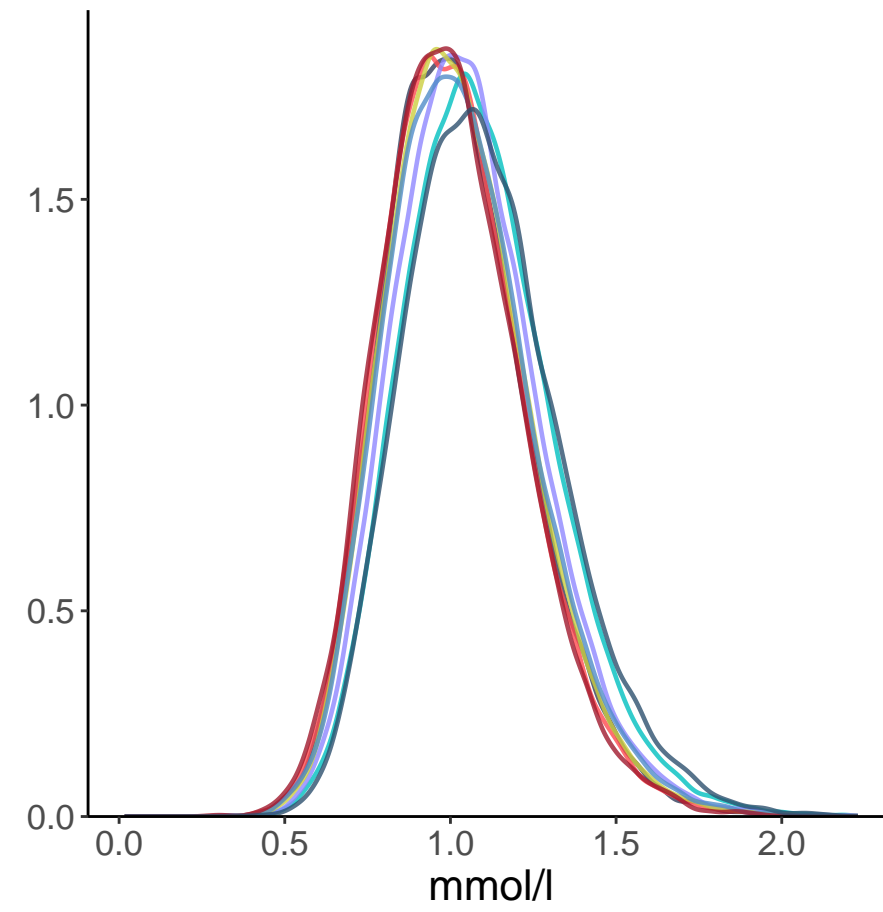
## M\_HDL\_P

Spectrometer



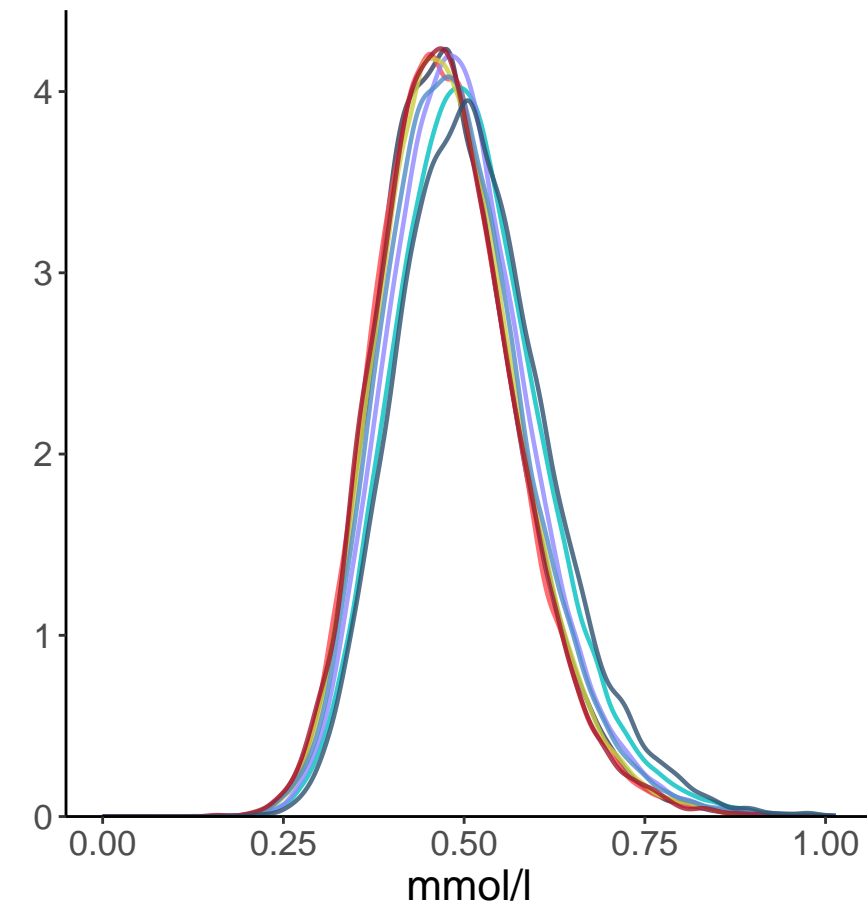
## M\_HDL\_L

Spectrometer



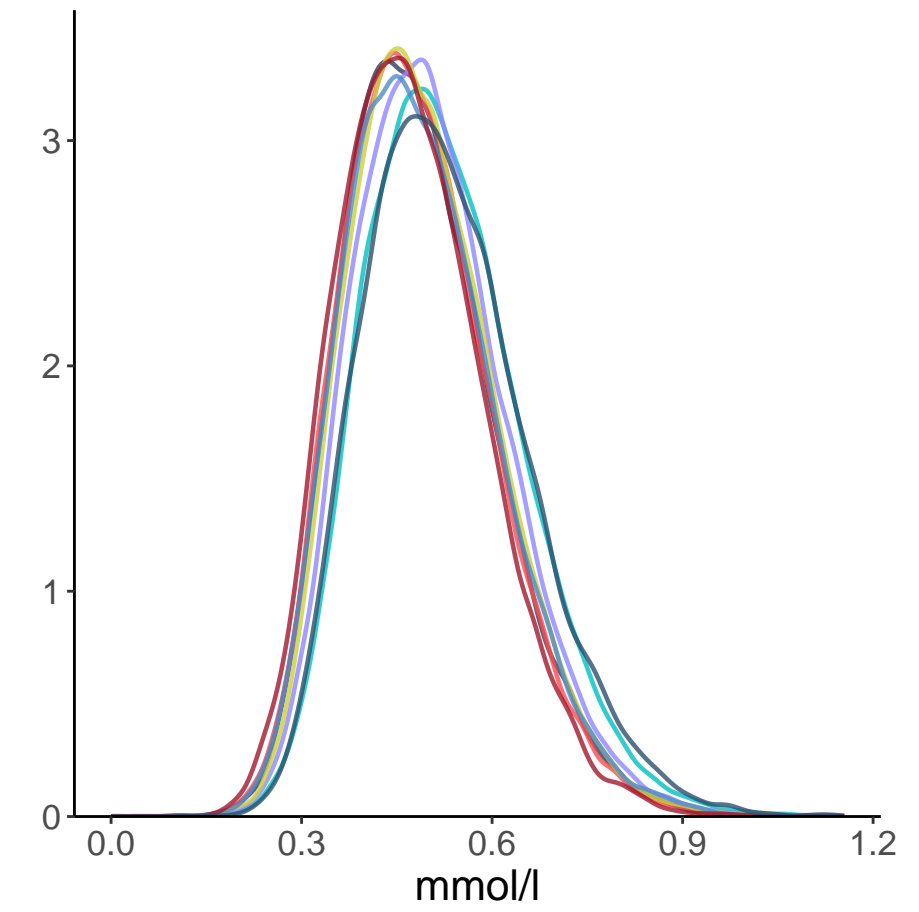
## M\_HDL\_PL

Spectrometer



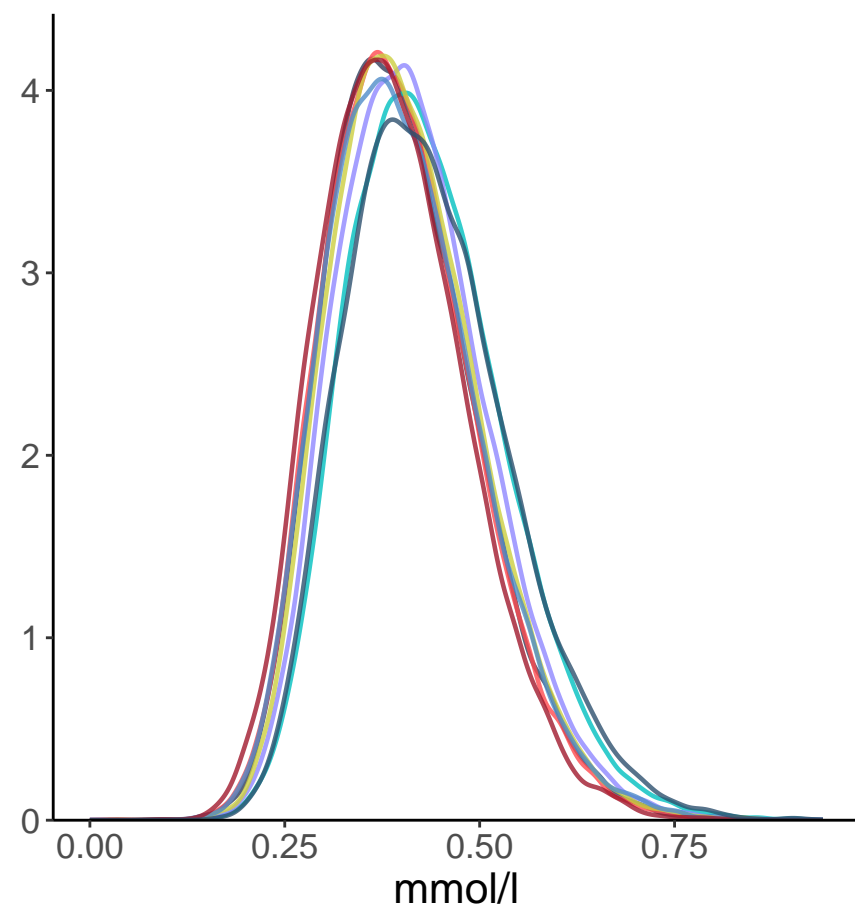
## M\_HDL\_C

Spectrometer



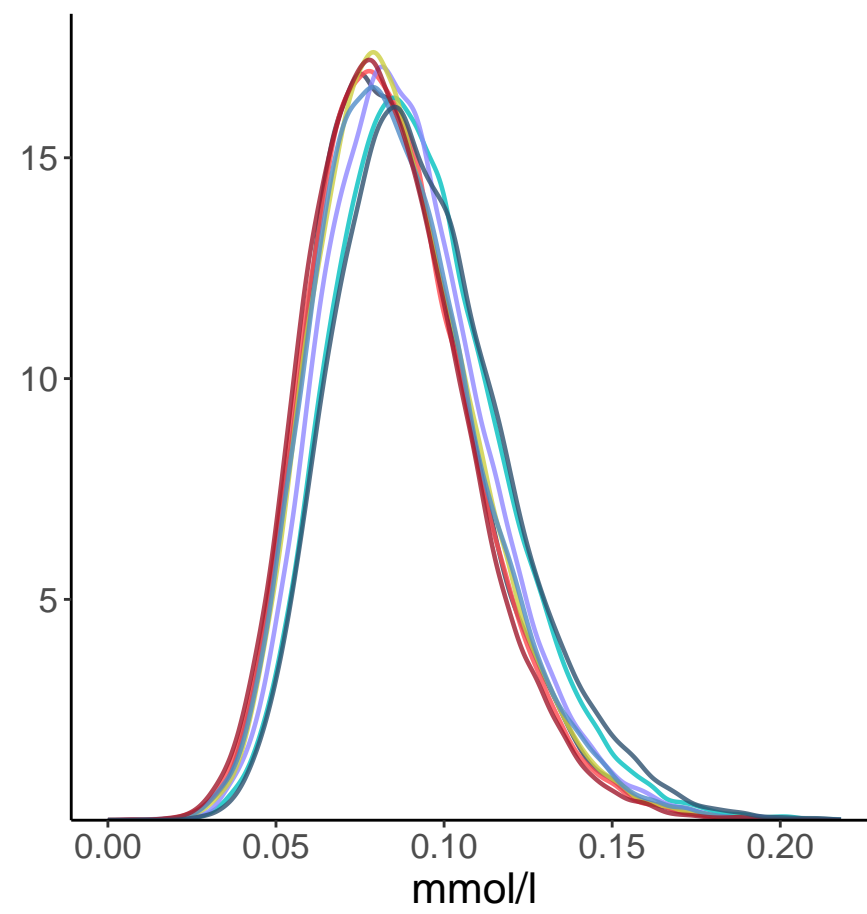
## M\_HDL\_CE

Spectrometer



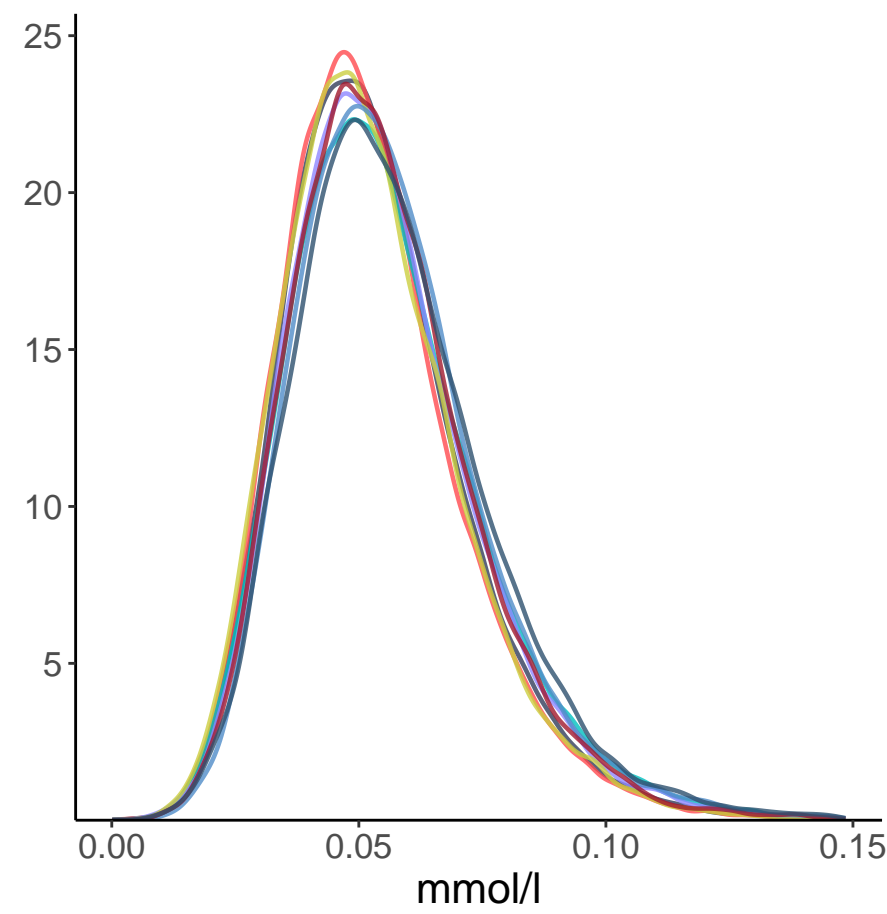
## M\_HDL\_FC

Spectrometer



## M\_HDL\_TG

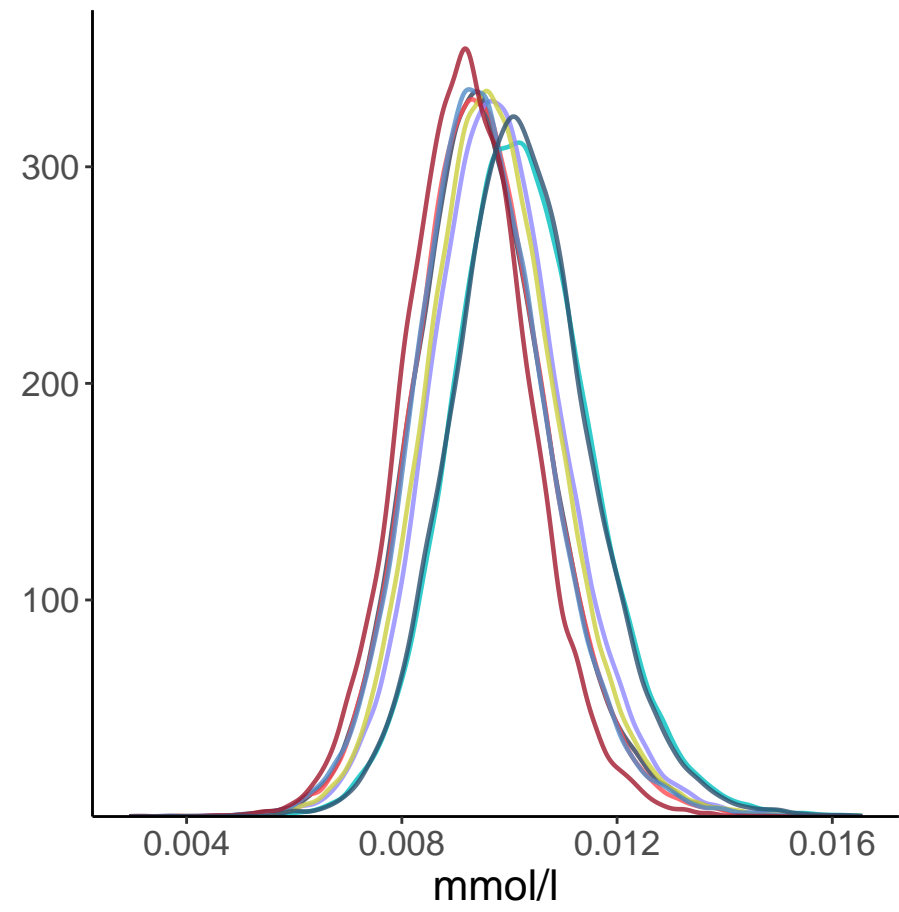
Spectrometer



# Small HDL (average diameter 8.7 nm)

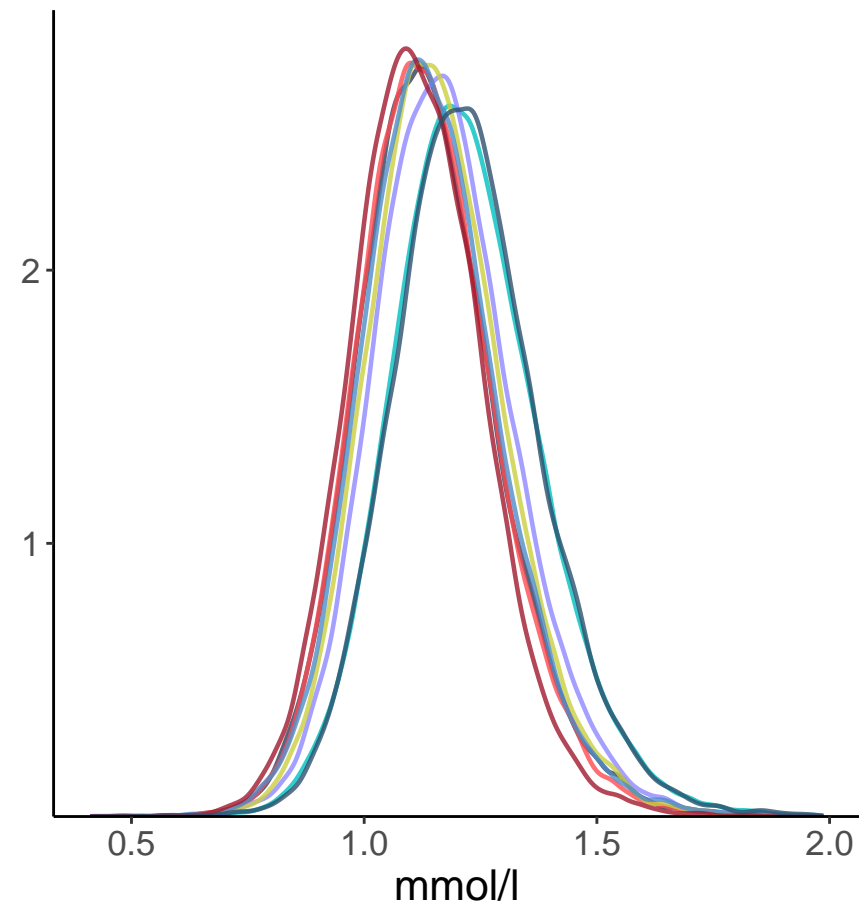
## S\_HDL\_P

Spectrometer



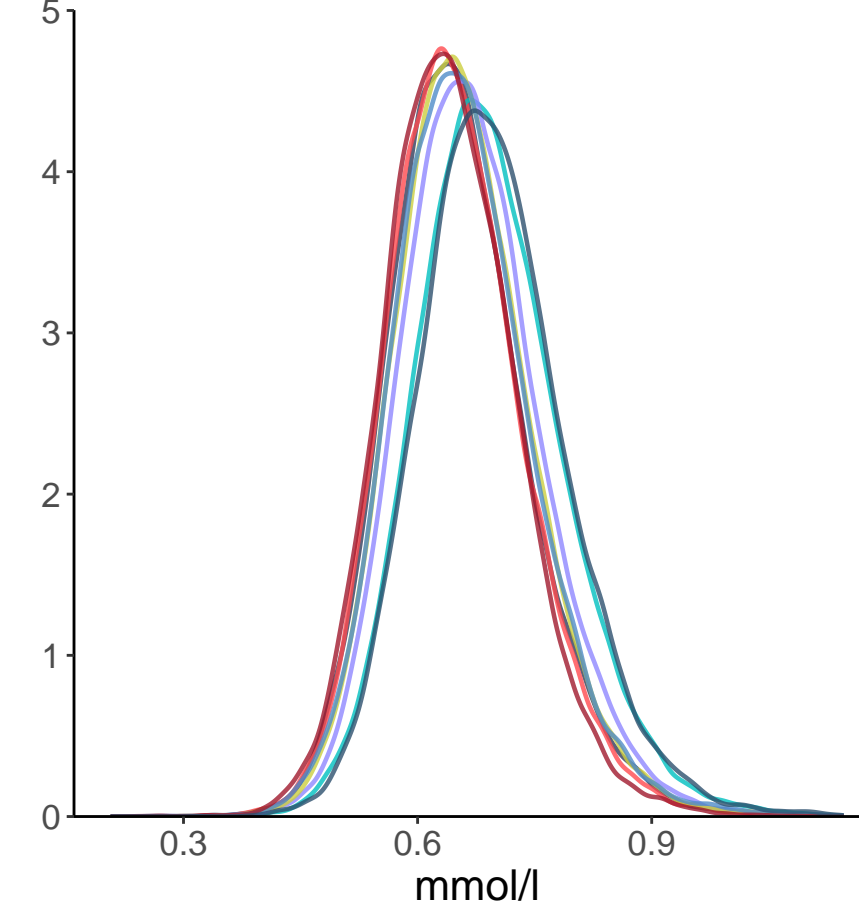
## S\_HDL\_L

Spectrometer



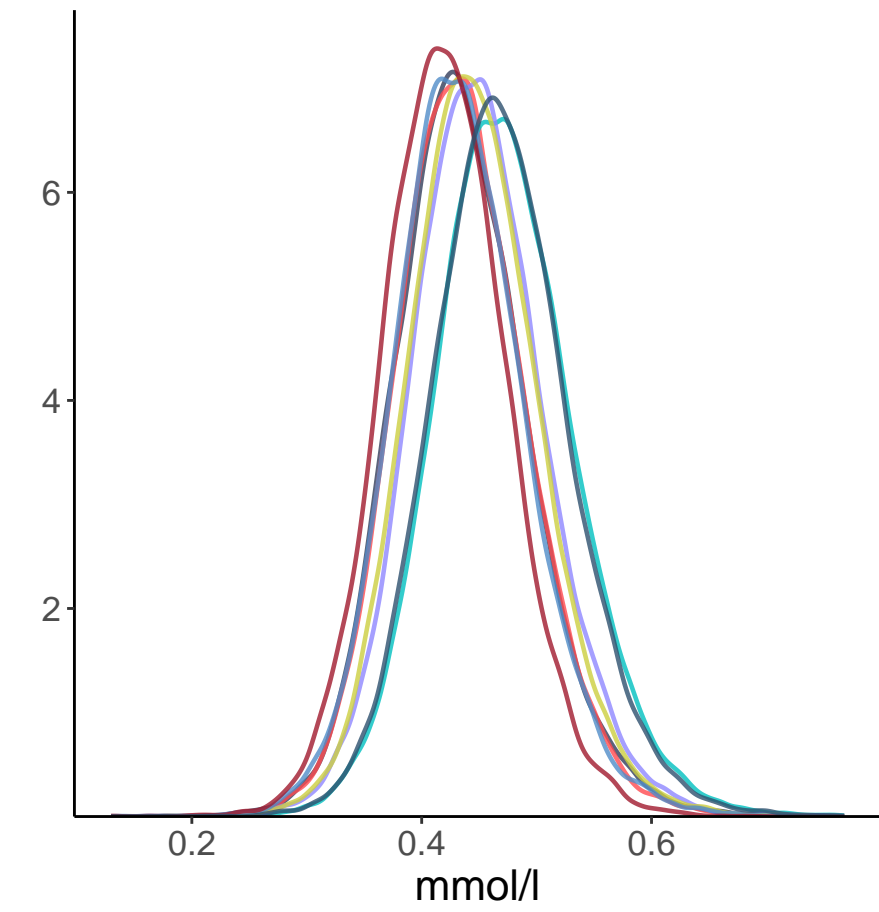
## S\_HDL\_PL

Spectrometer



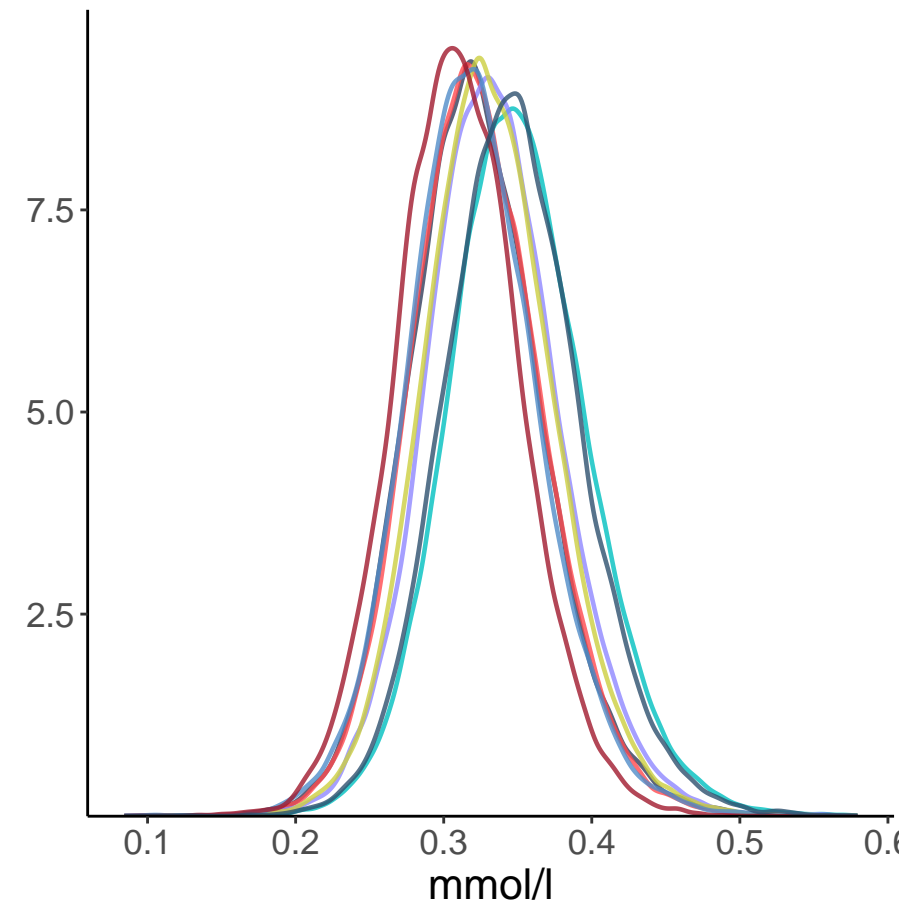
## S\_HDL\_C

Spectrometer



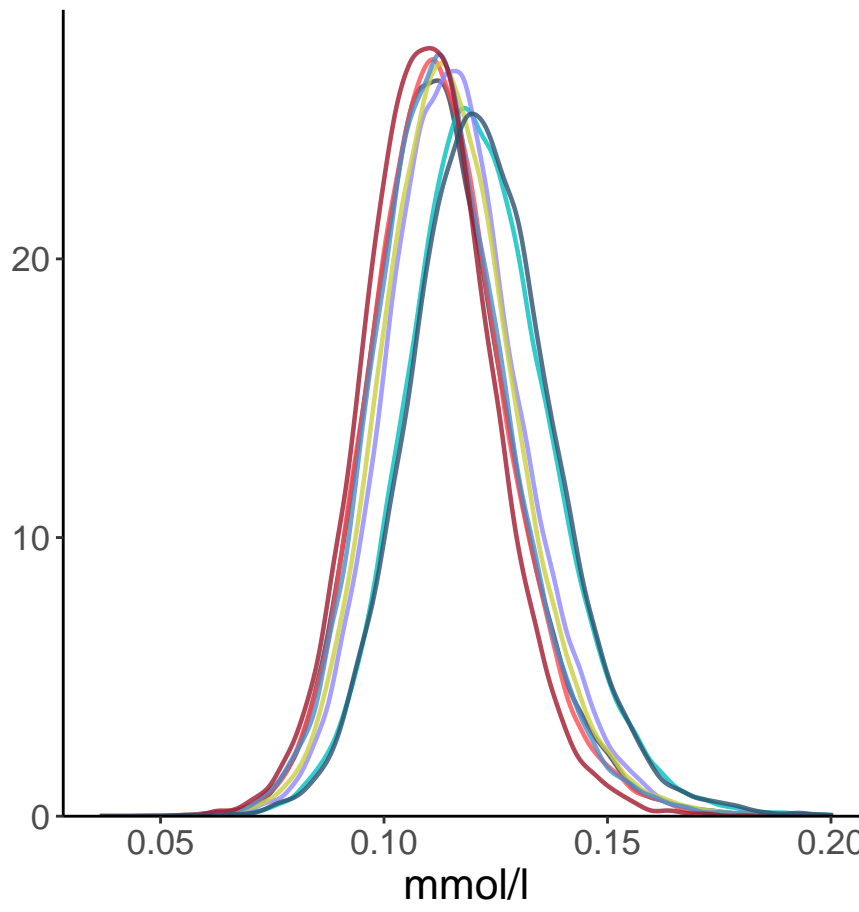
## S\_HDL\_CE

Spectrometer



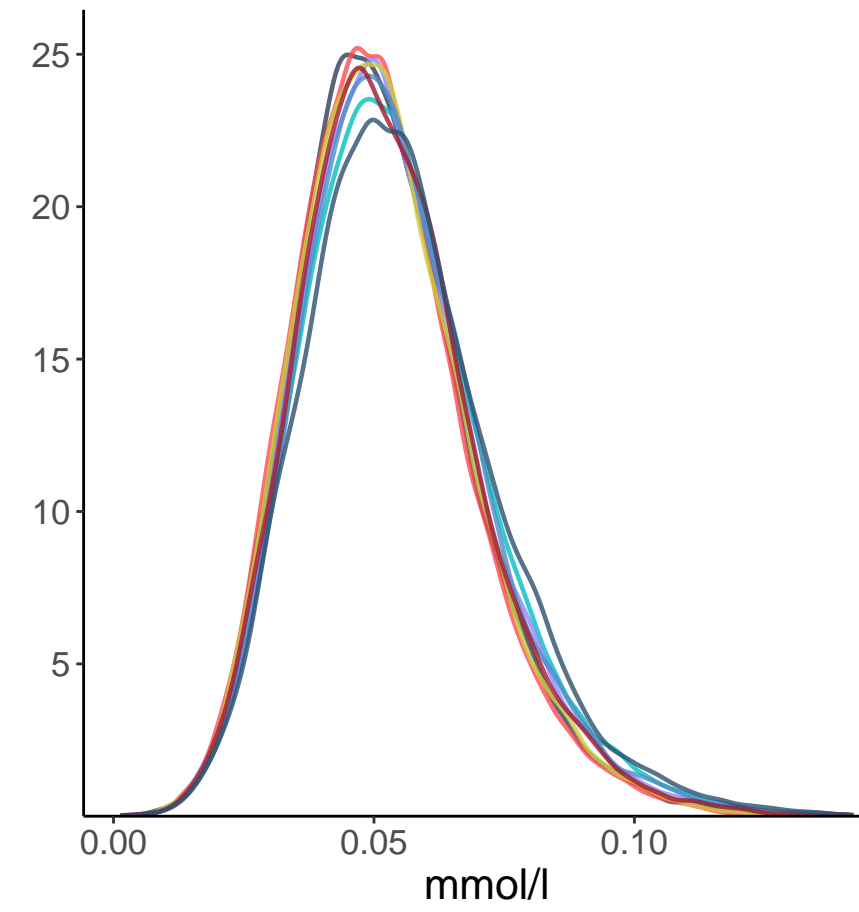
## S\_HDL\_FC

Spectrometer



## S\_HDL\_TG

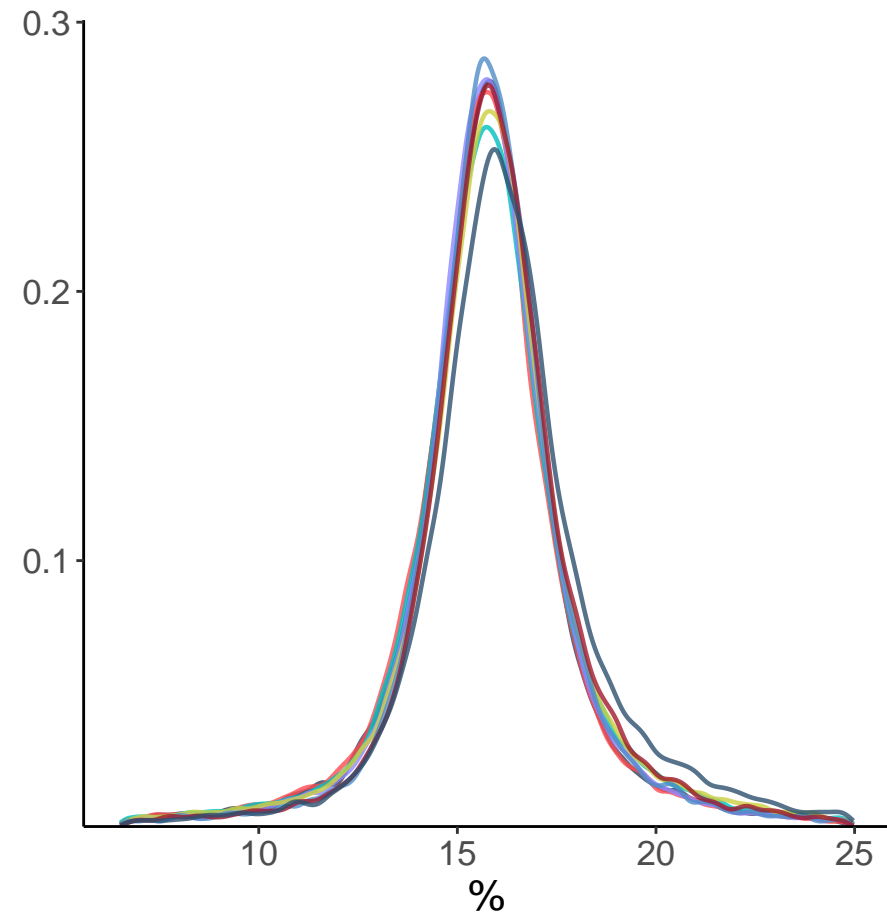
Spectrometer



# Chylomicrons and extremely large VLDL ratios

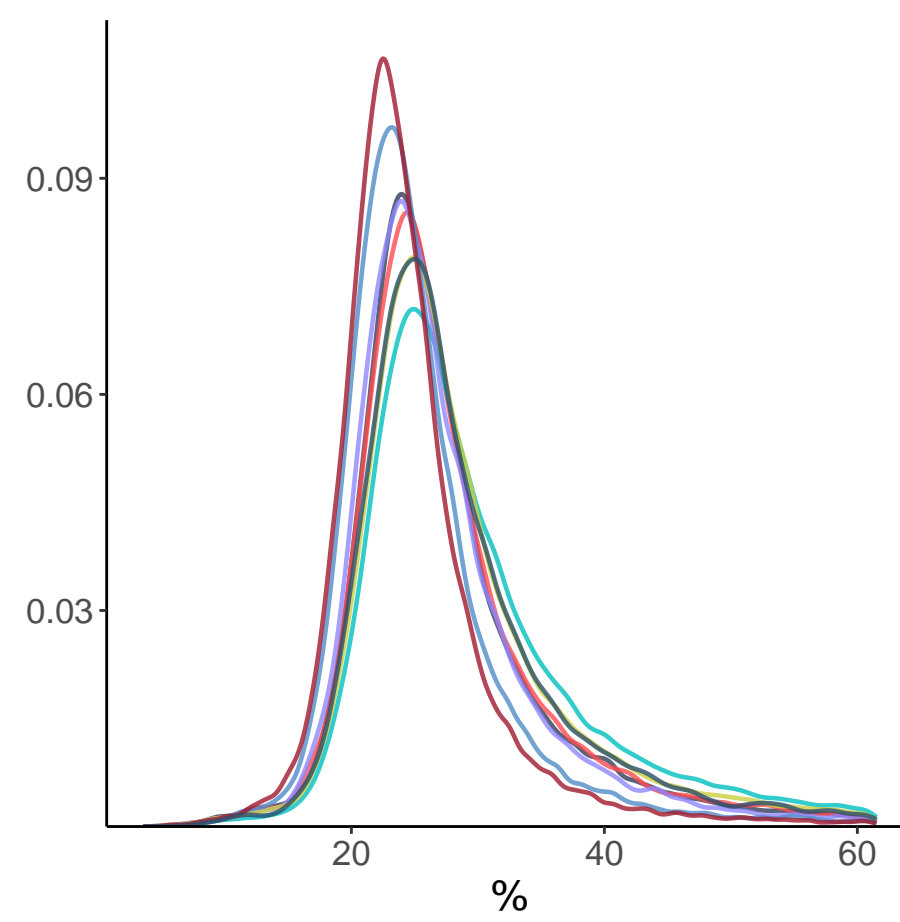
## XXL\_VLDL\_PL\_pct

Spectrometer



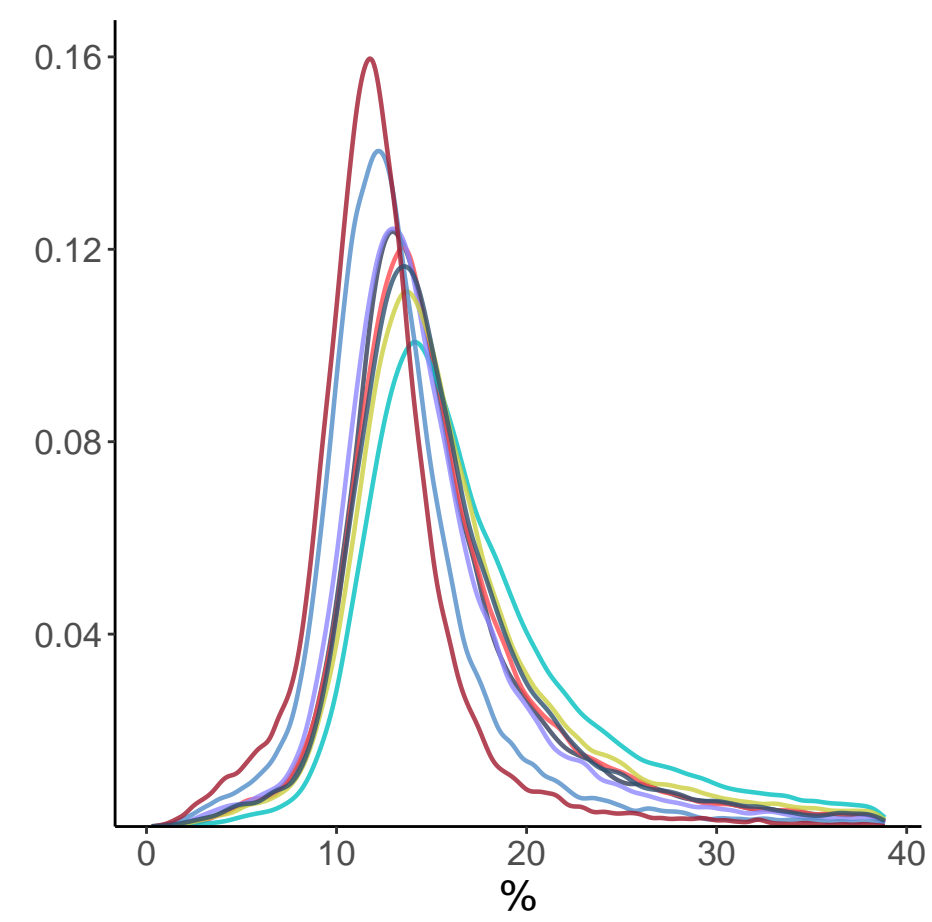
## XXL\_VLDL\_C\_pct

Spectrometer



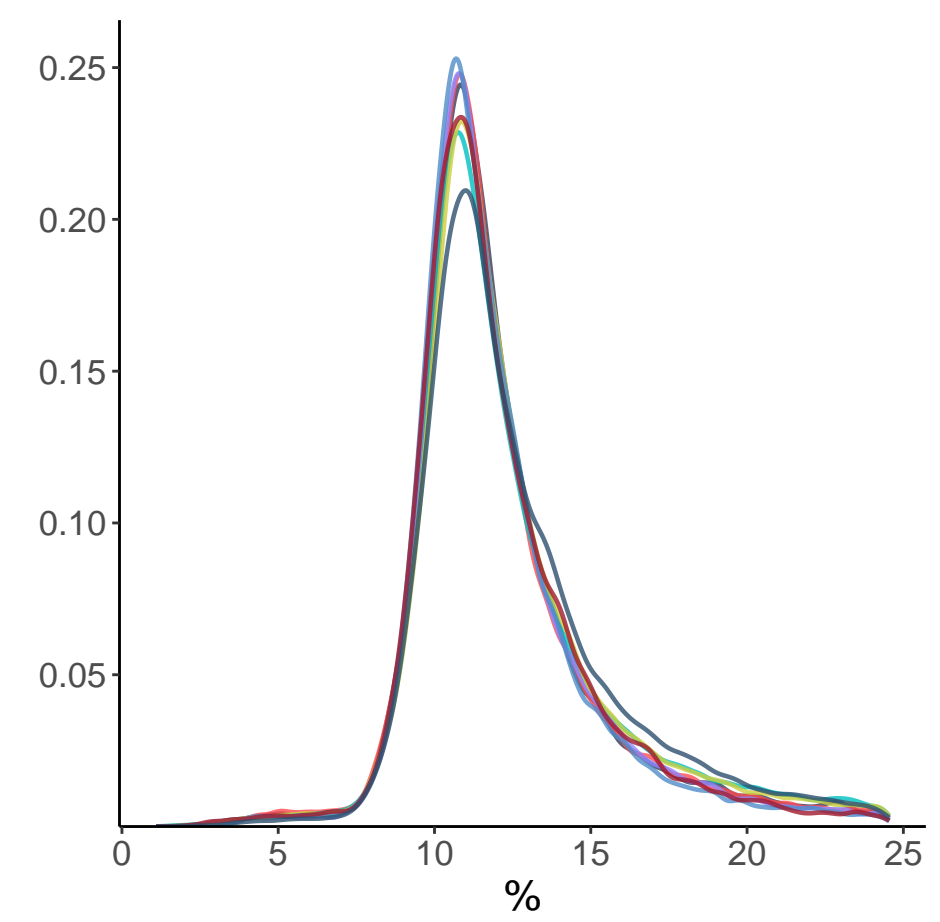
## XXL\_VLDL\_CE\_pct

Spectrometer



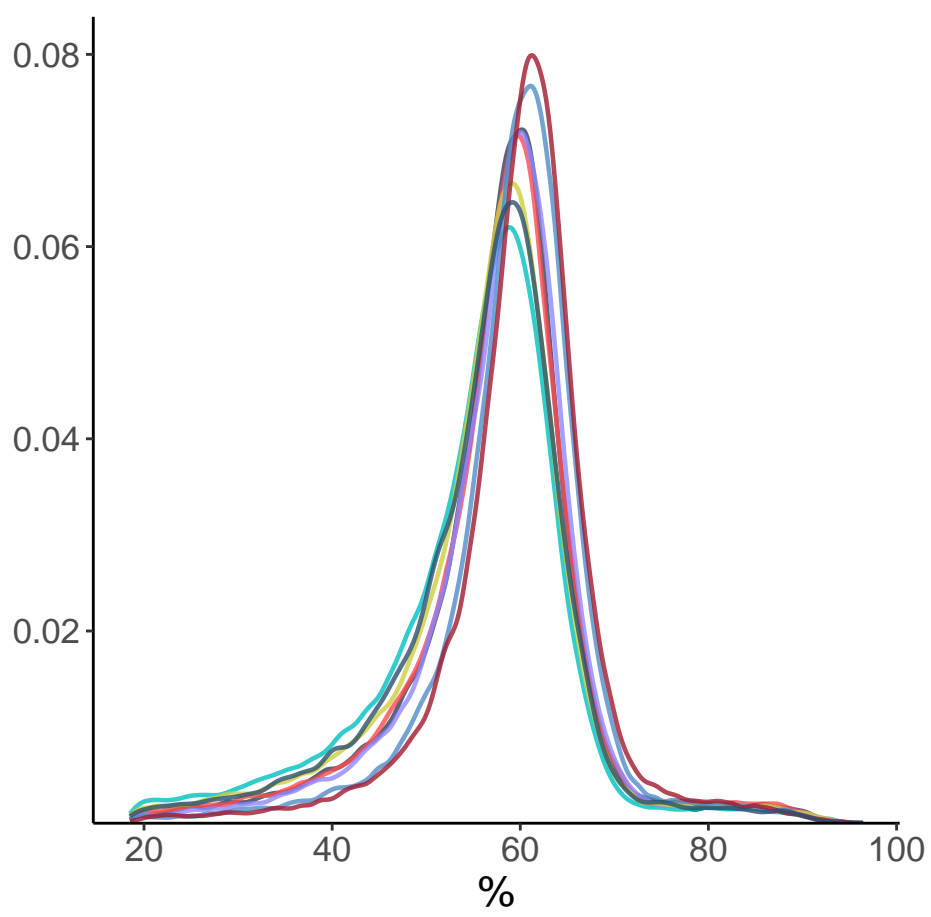
## XXL\_VLDL\_FC\_pct

Spectrometer



## XXL\_VLDL\_TG\_pct

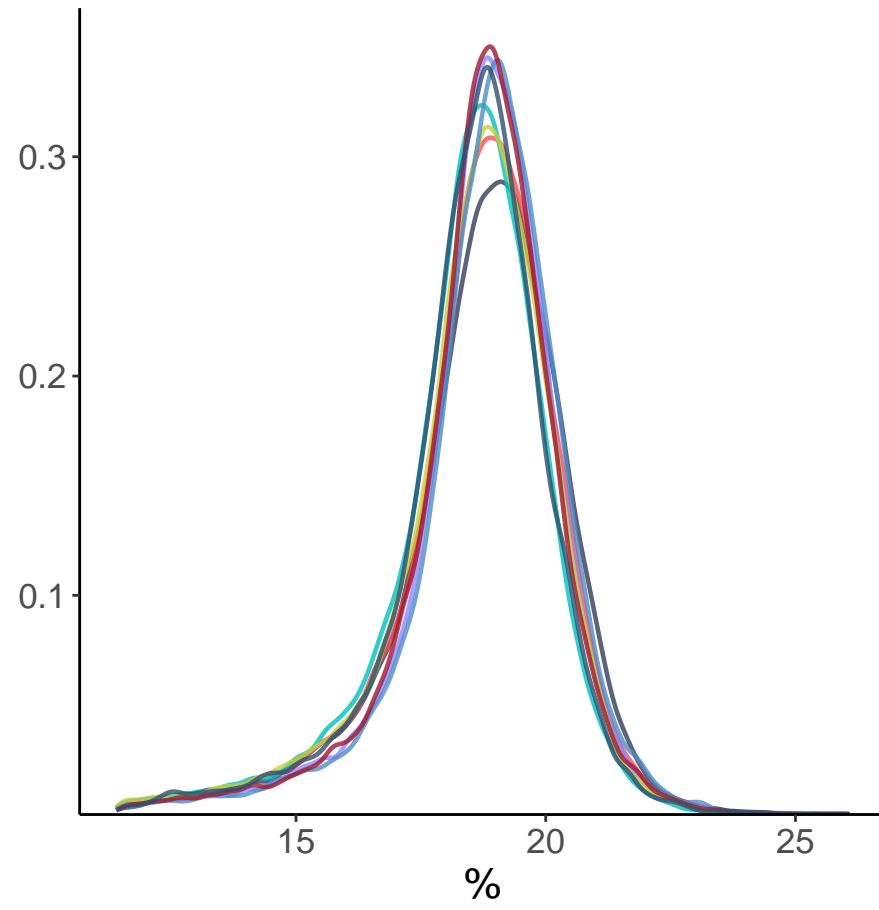
Spectrometer



# Very large VLDL ratios

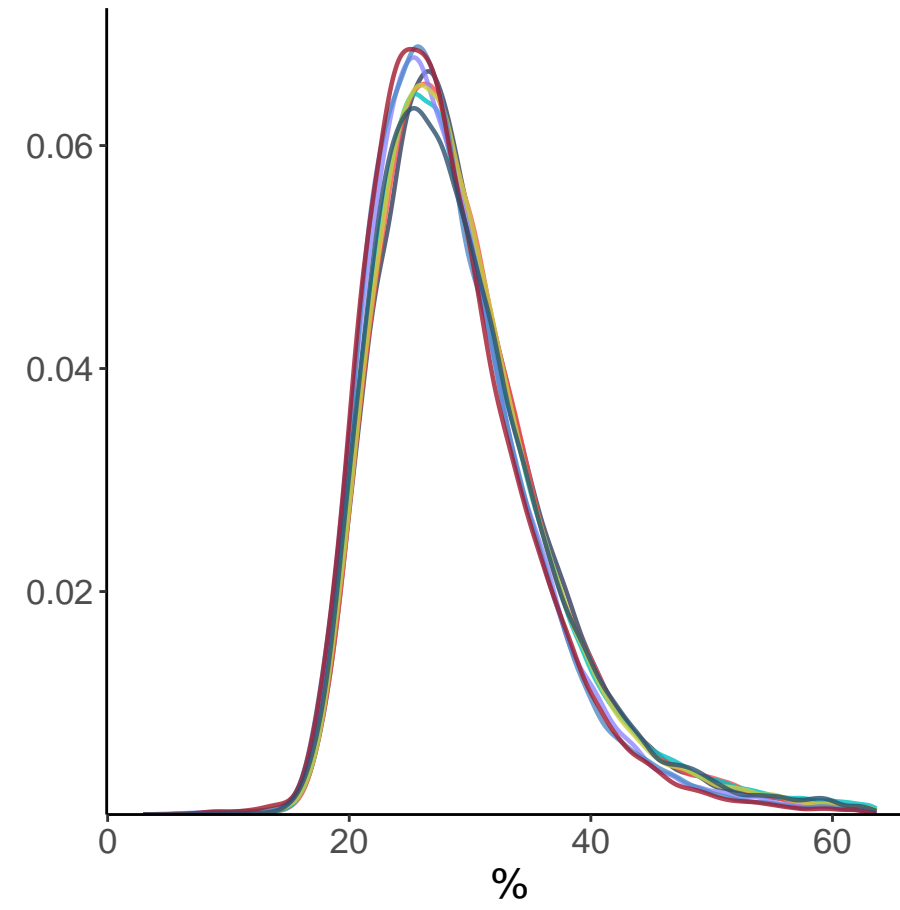
### XL\_VLDL\_PL\_pct

Spectrometer



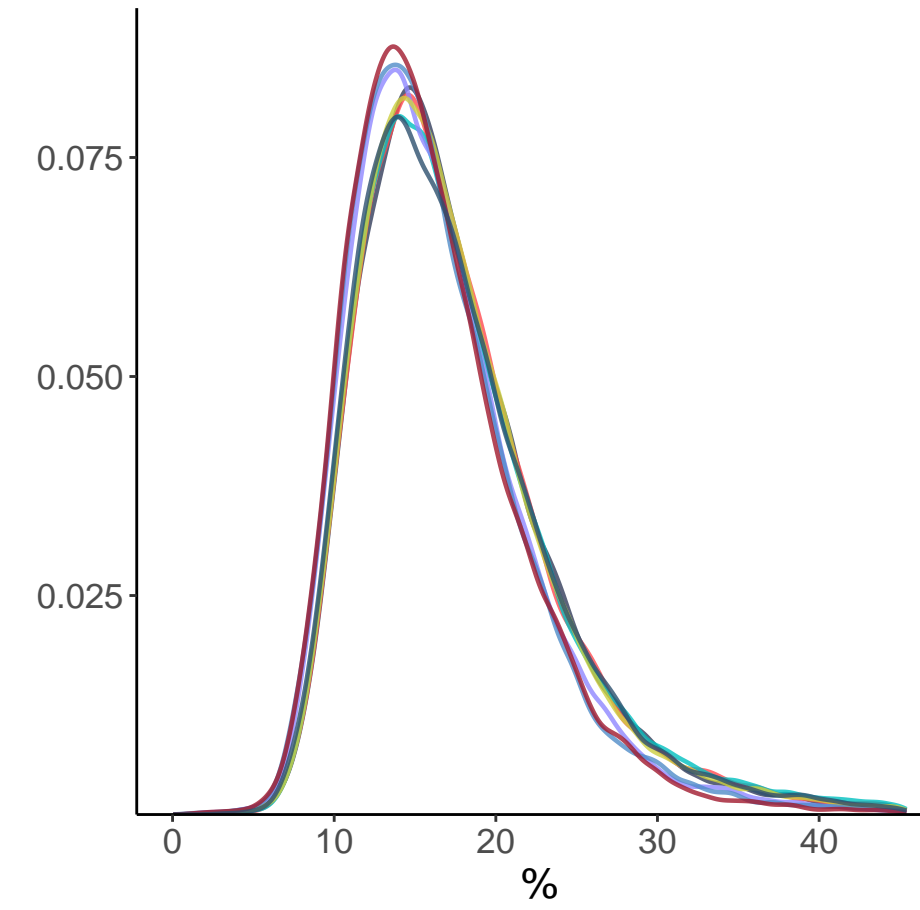
### XL\_VLDL\_C\_pct

Spectrometer



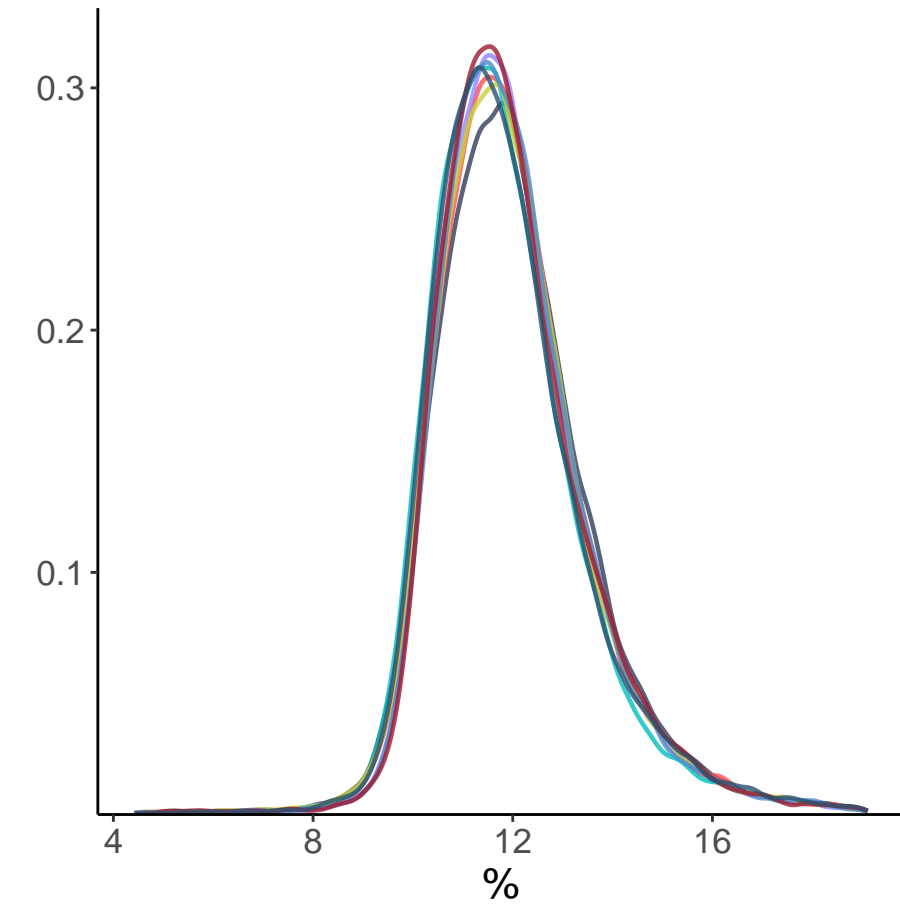
### XL\_VLDL\_CE\_pct

Spectrometer



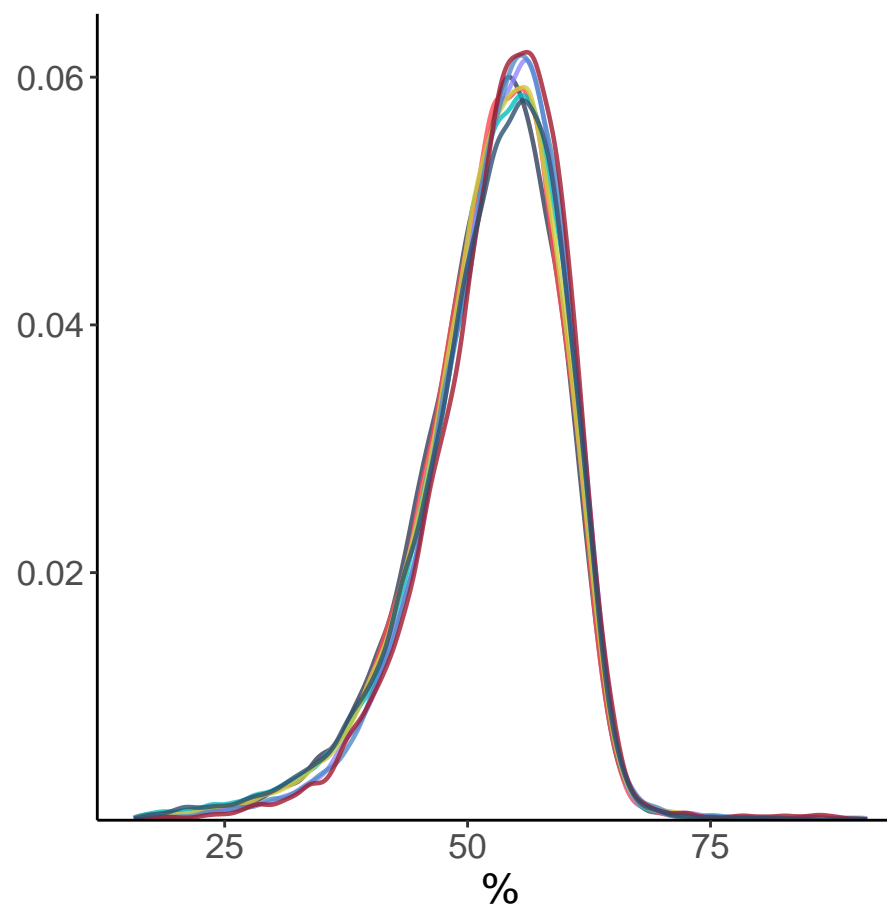
### XL\_VLDL\_FC\_pct

Spectrometer



### XL\_VLDL\_TG\_pct

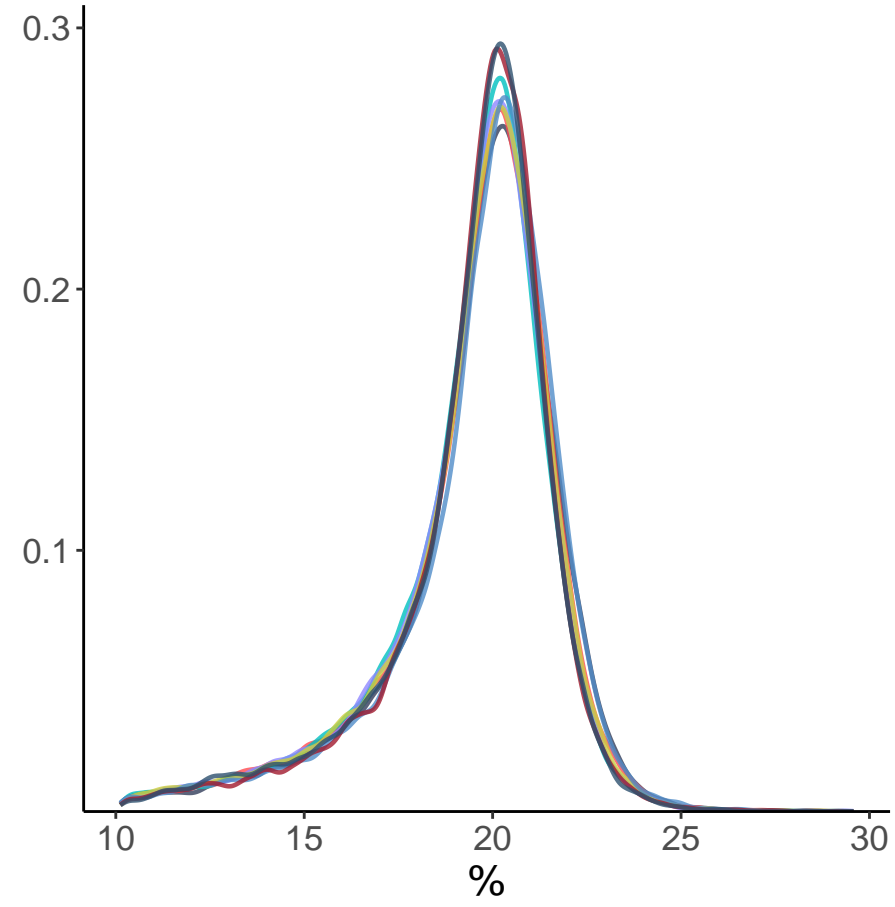
Spectrometer



# Large VLDL ratios

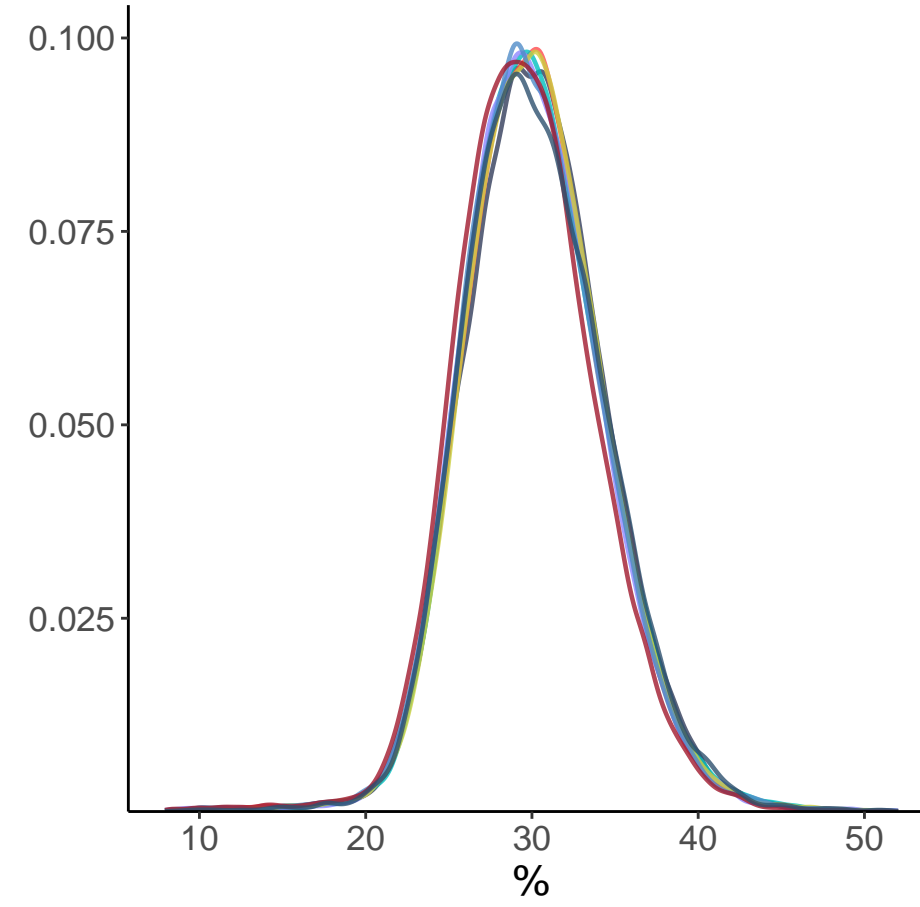
## L\_VLDL\_PL\_pct

Spectrometer



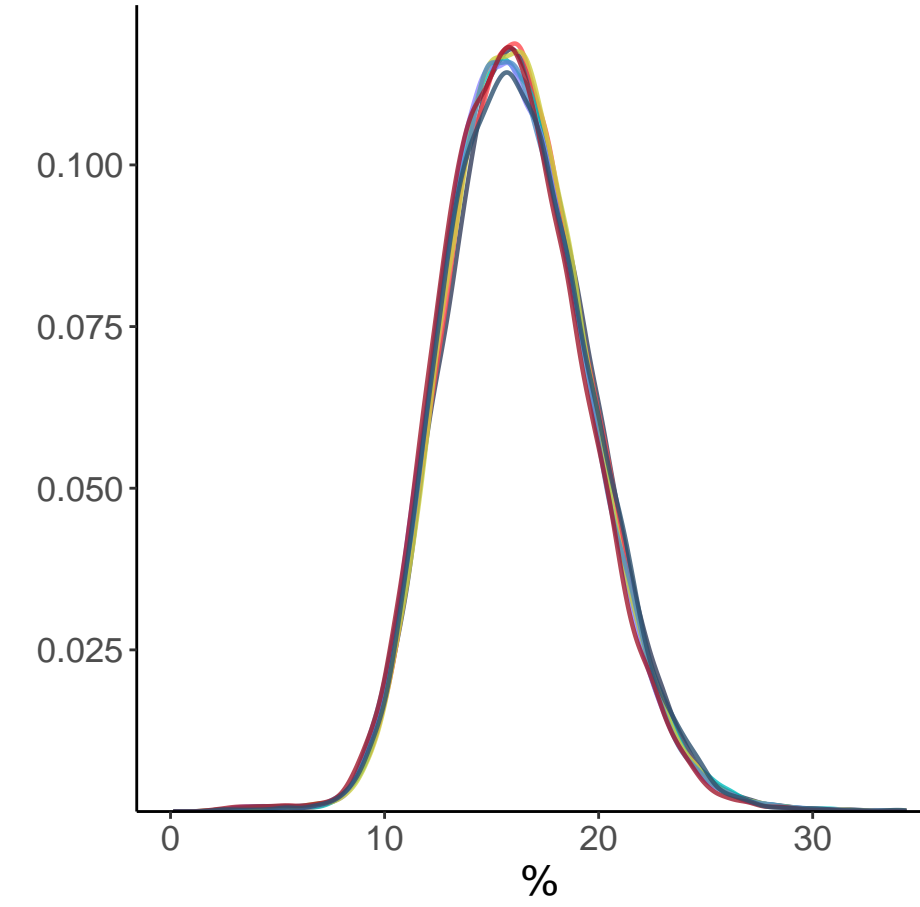
## L\_VLDL\_C\_pct

Spectrometer



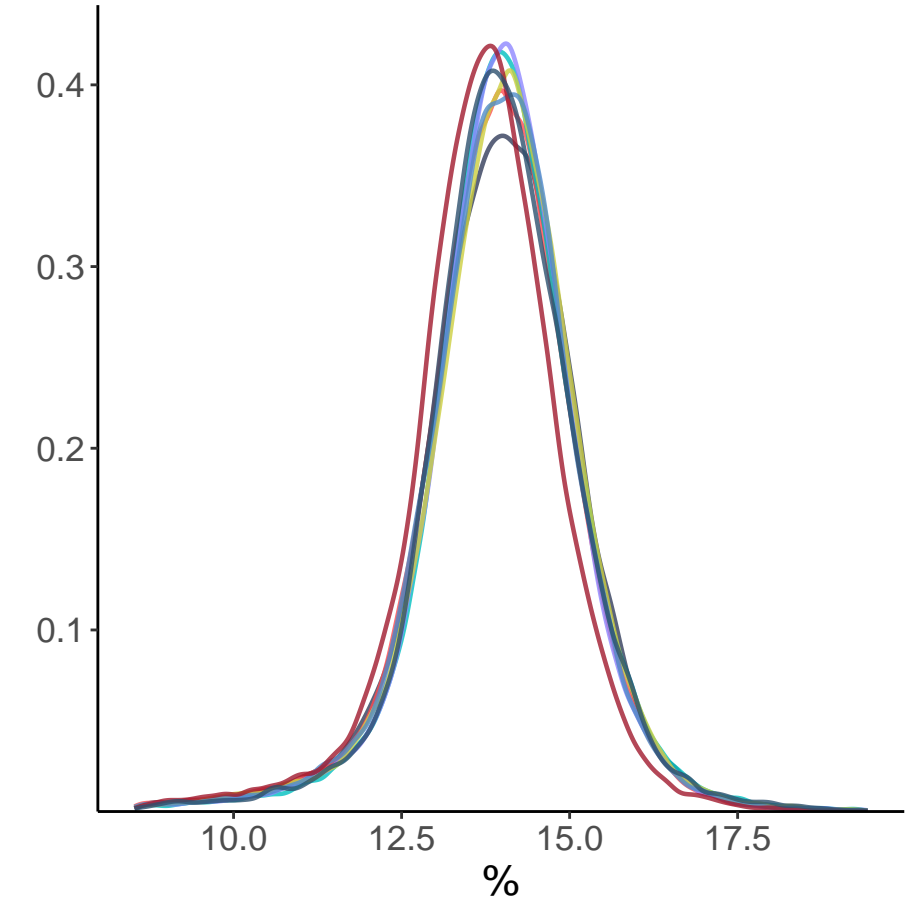
## L\_VLDL\_CE\_pct

Spectrometer



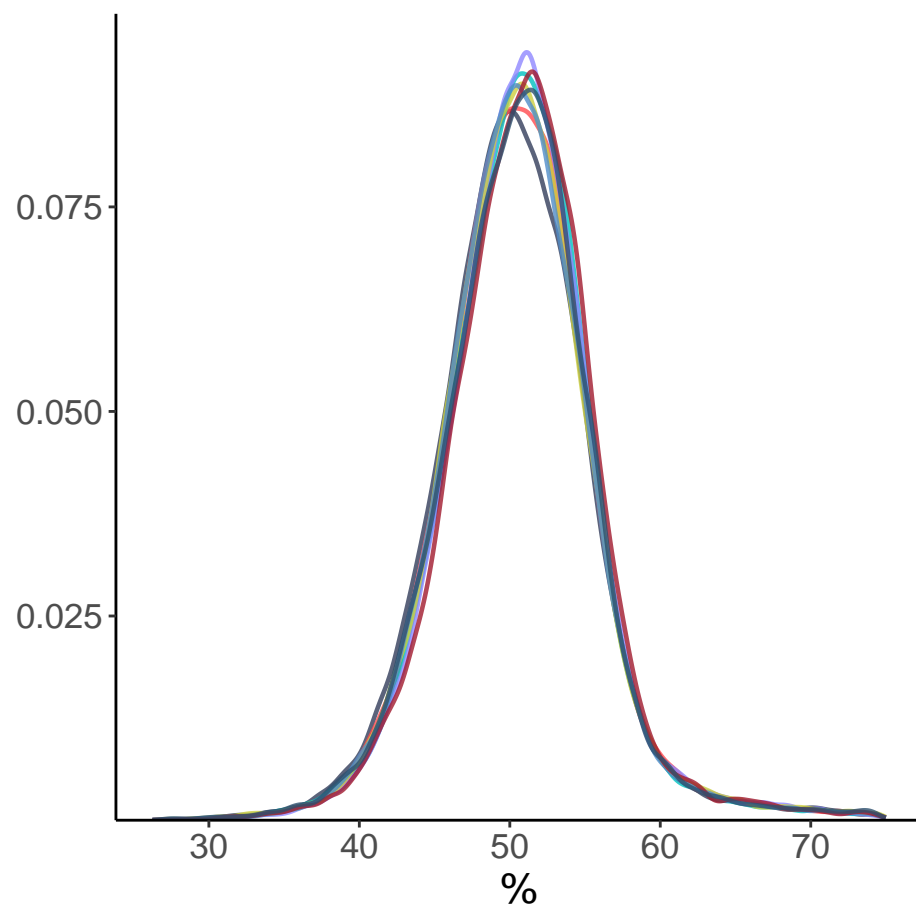
## L\_VLDL\_FC\_pct

Spectrometer



## L\_VLDL\_TG\_pct

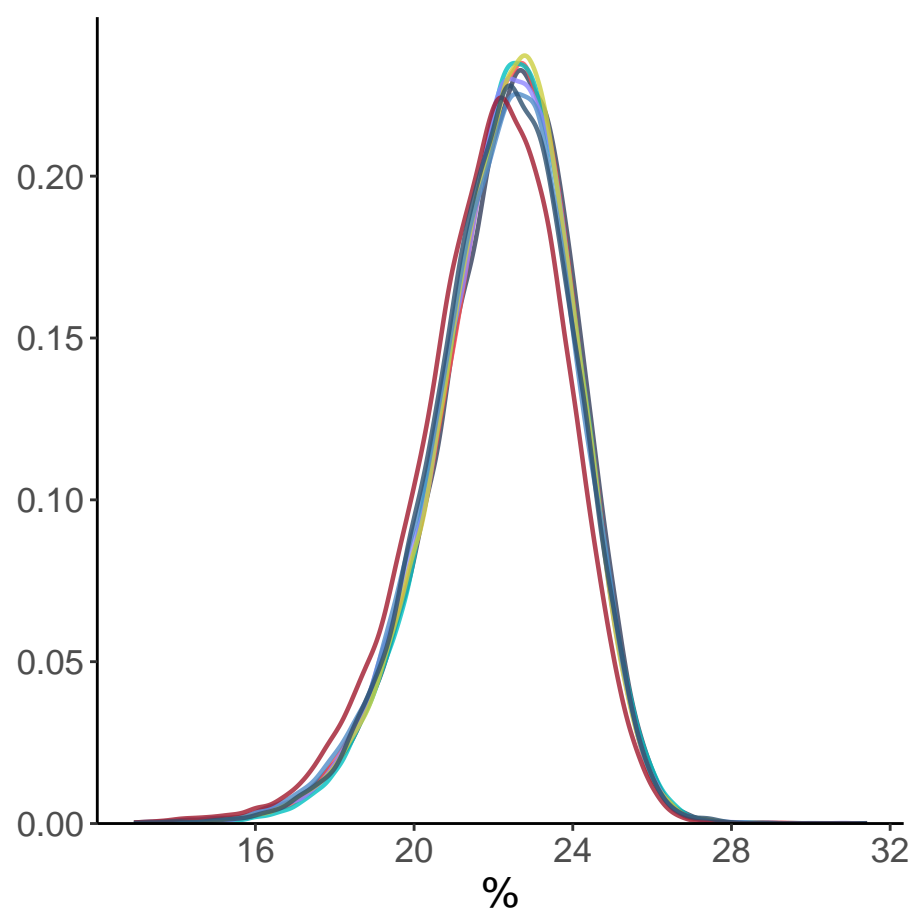
Spectrometer



# Medium VLDL ratios

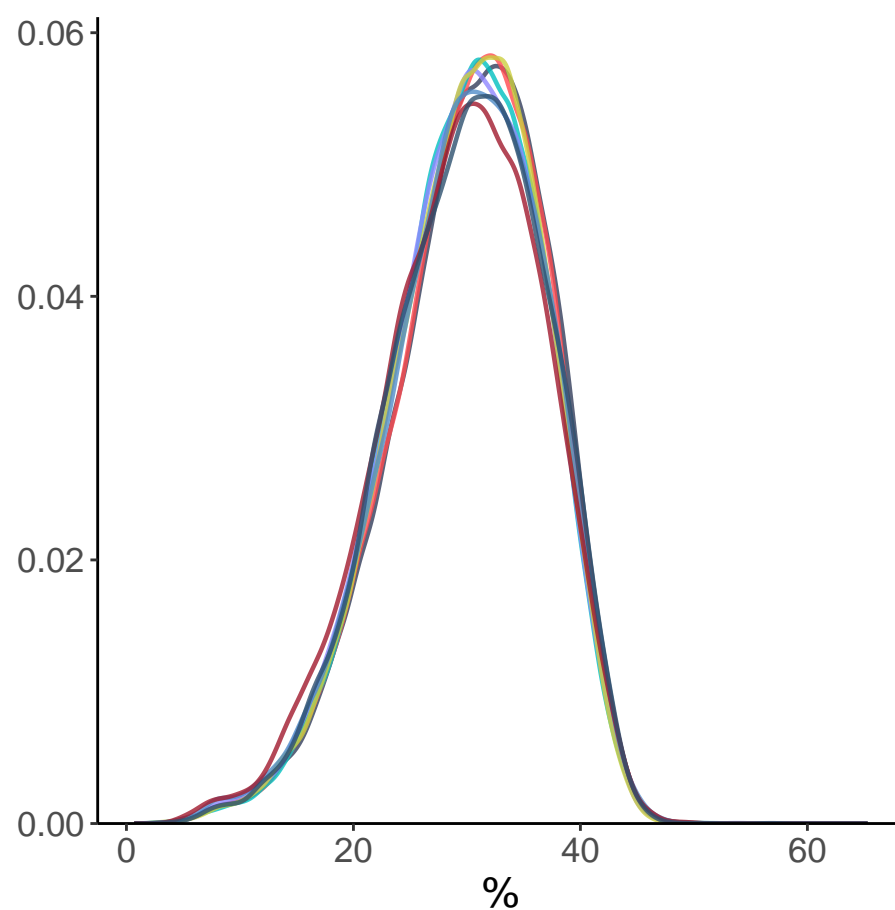
## M\_VLDL\_PL\_pct

Spectrometer



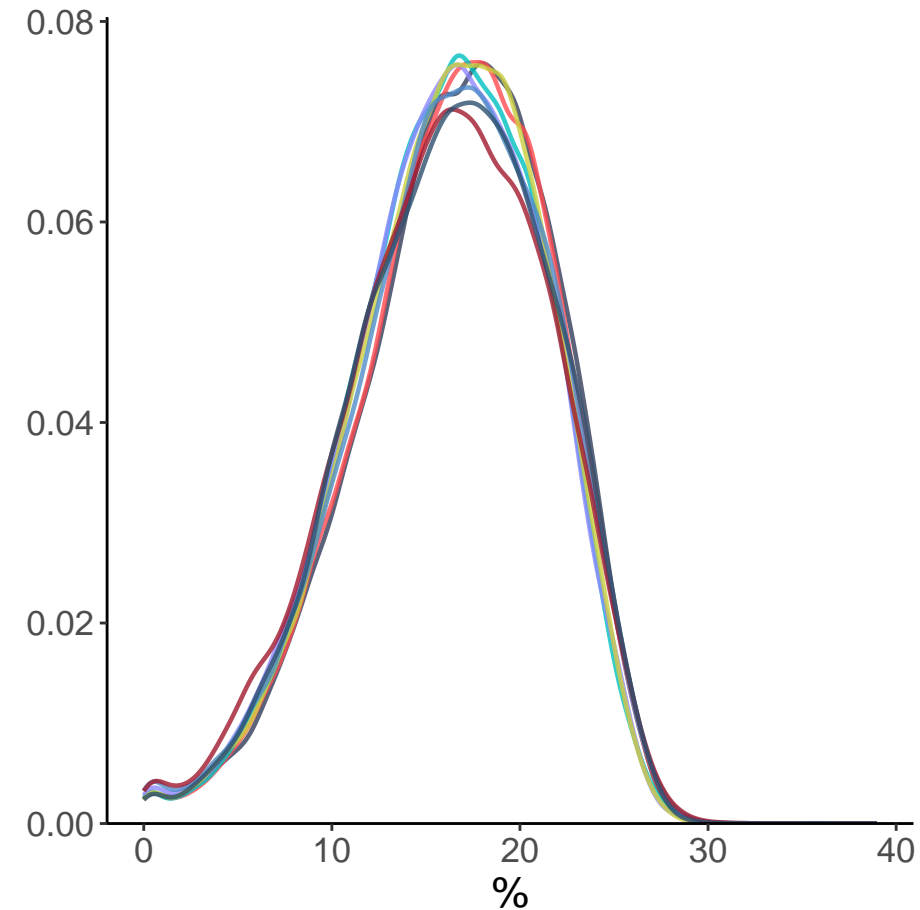
## M\_VLDL\_C\_pct

Spectrometer



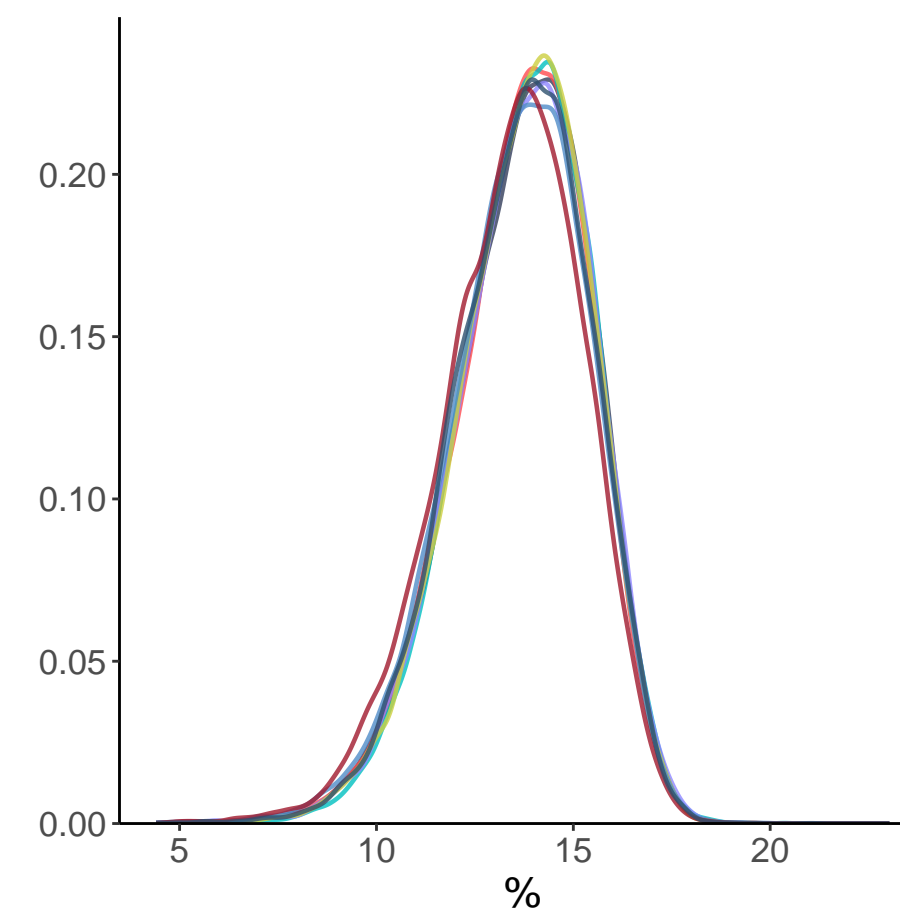
## M\_VLDL\_CE\_pct

Spectrometer



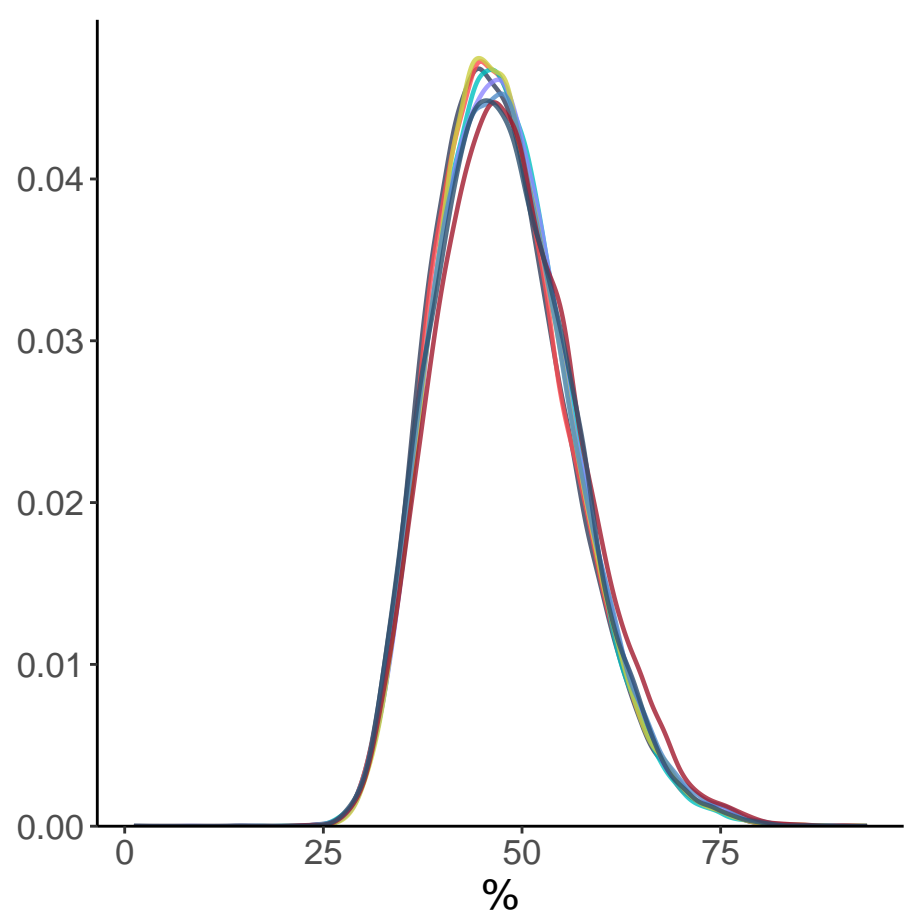
## M\_VLDL\_FC\_pct

Spectrometer



## M\_VLDL\_TG\_pct

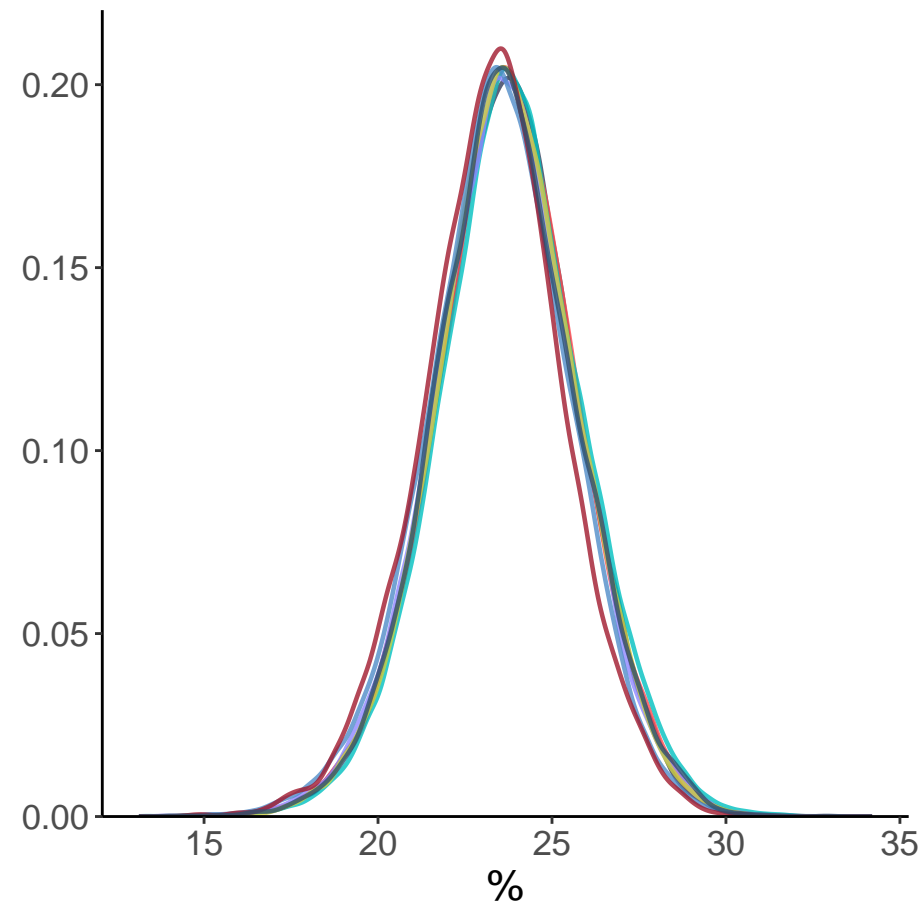
Spectrometer



# Small VLDL ratios

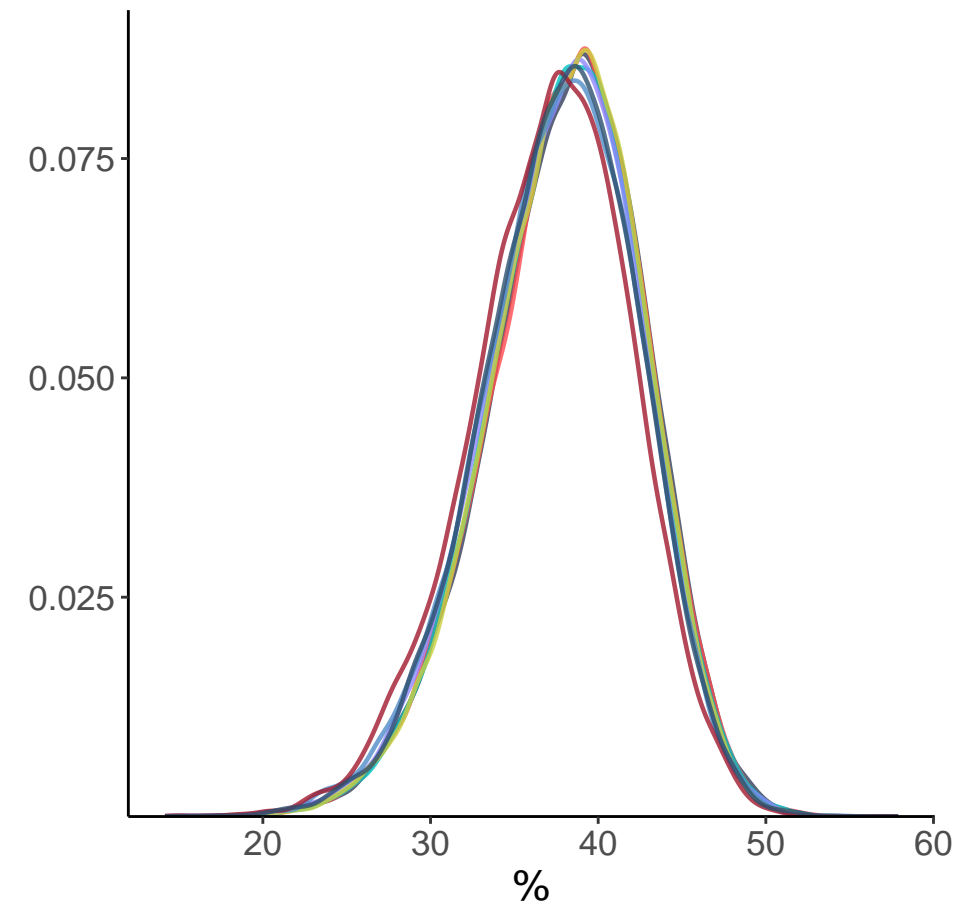
## S\_VLDL\_PL\_pct

Spectrometer



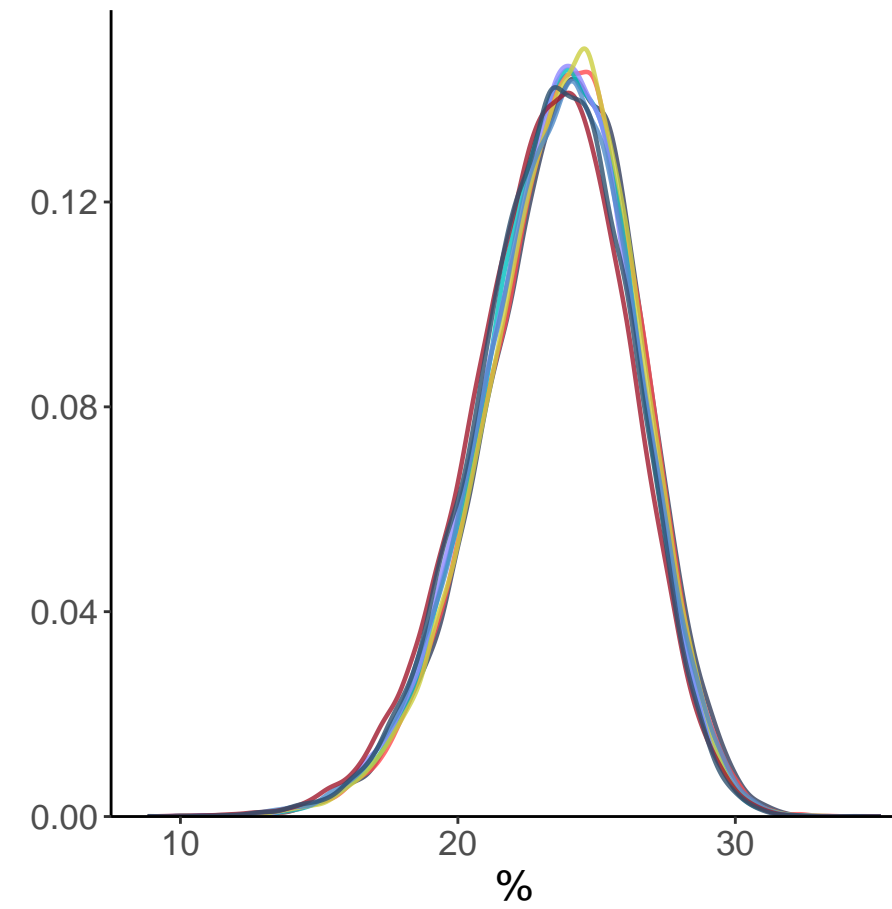
## S\_VLDL\_C\_pct

Spectrometer



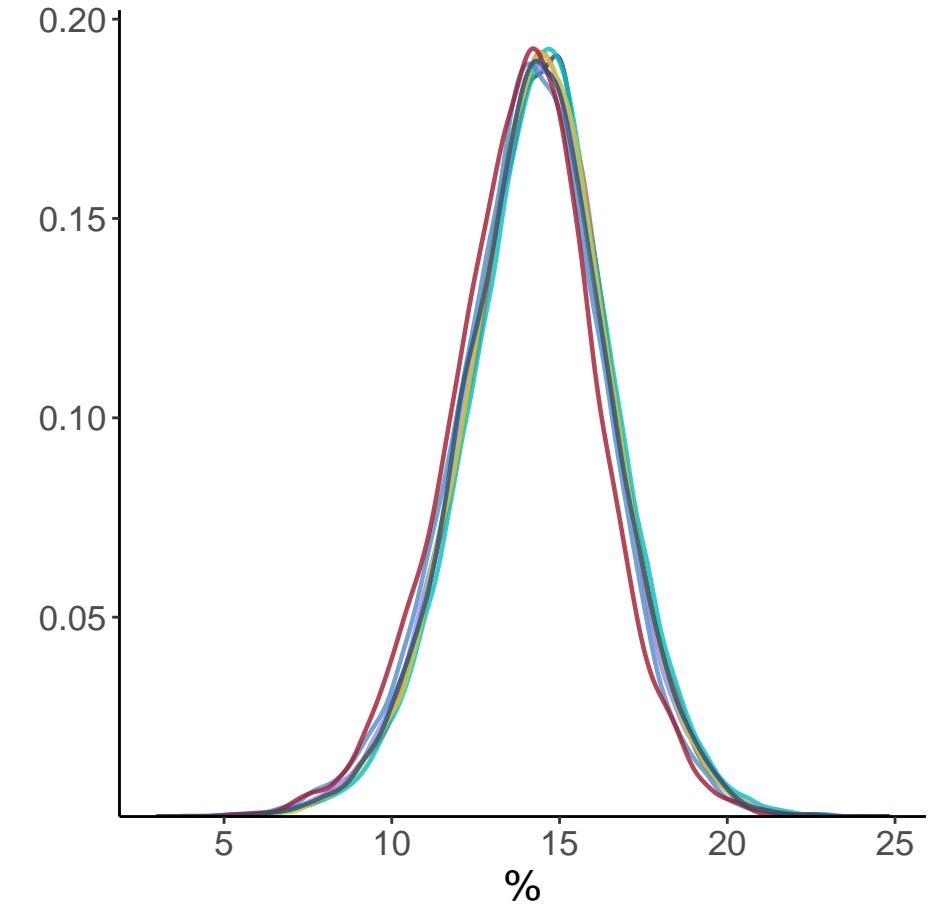
## S\_VLDL\_CE\_pct

Spectrometer



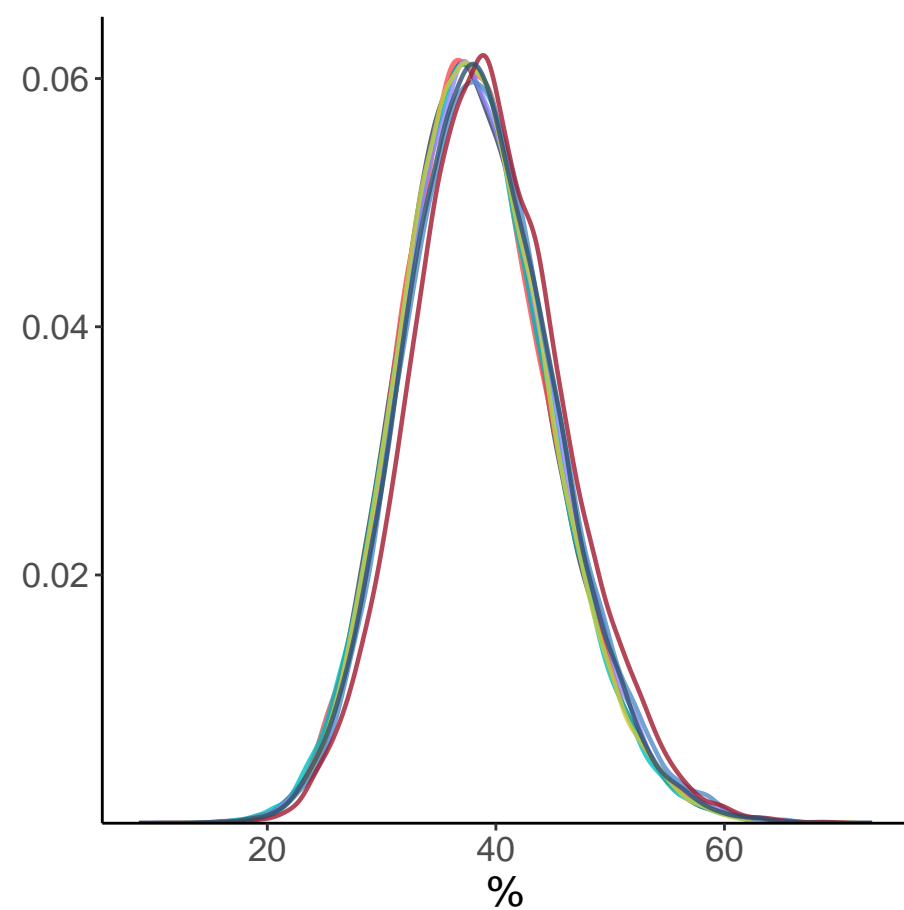
## S\_VLDL\_FC\_pct

Spectrometer



## S\_VLDL\_TG\_pct

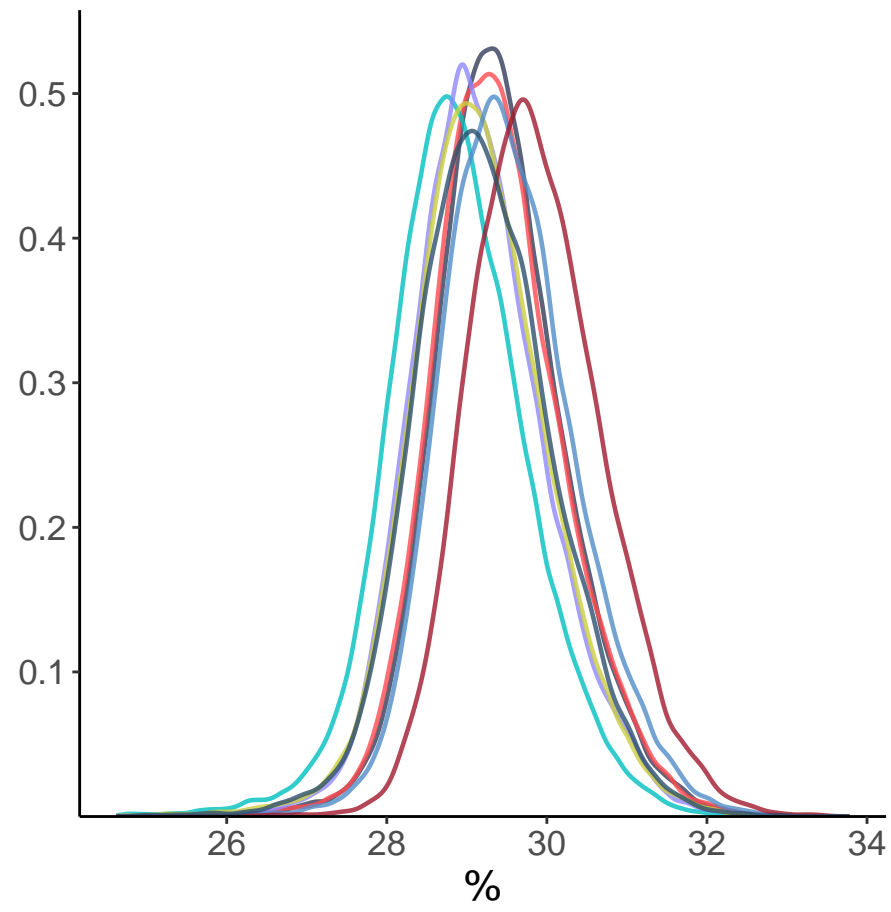
Spectrometer



# Very small VLDL ratios

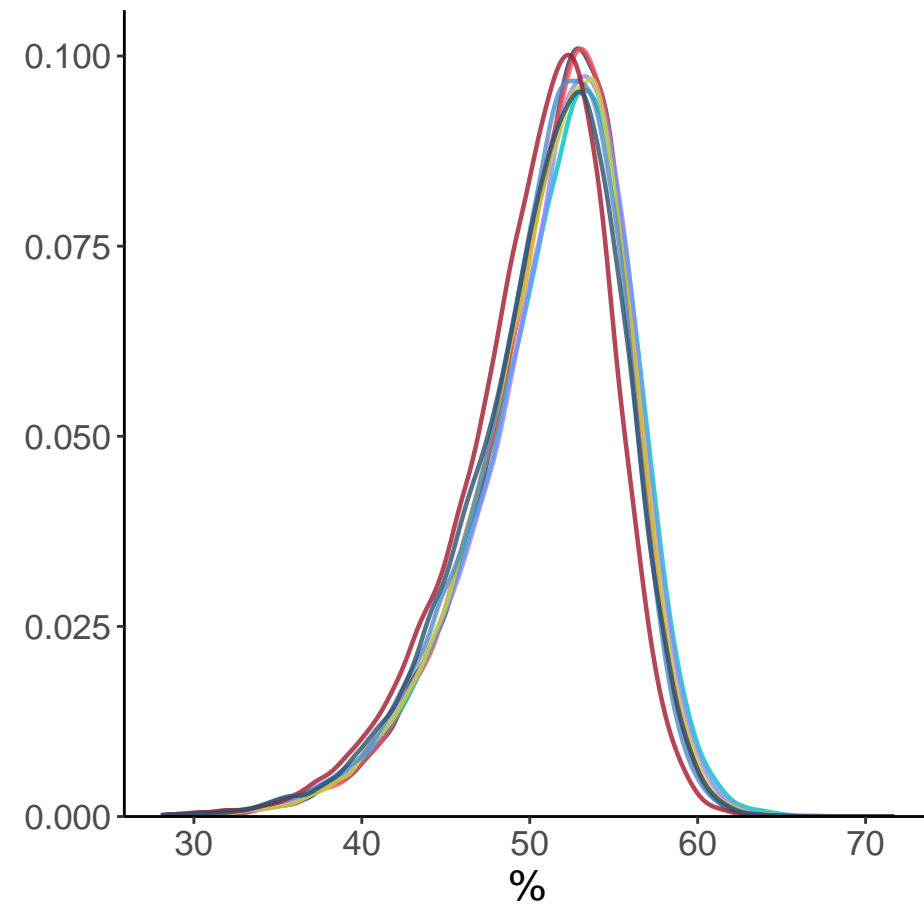
## XS\_VLDL\_PL\_pct

Spectrometer



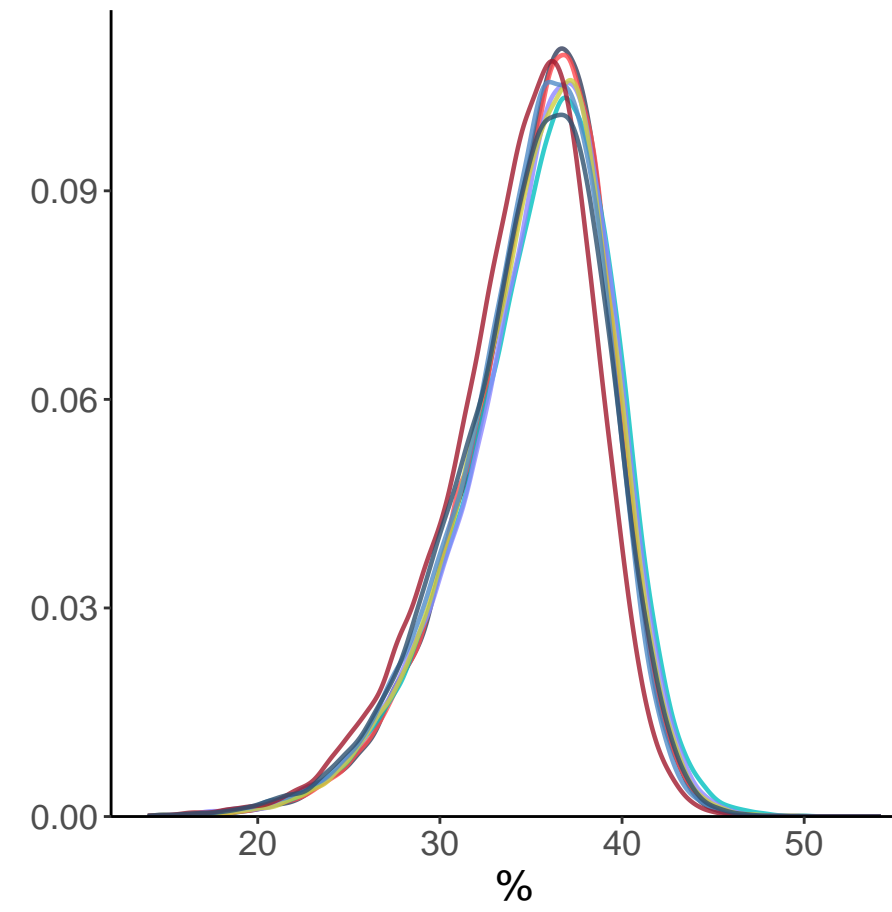
## XS\_VLDL\_C\_pct

Spectrometer



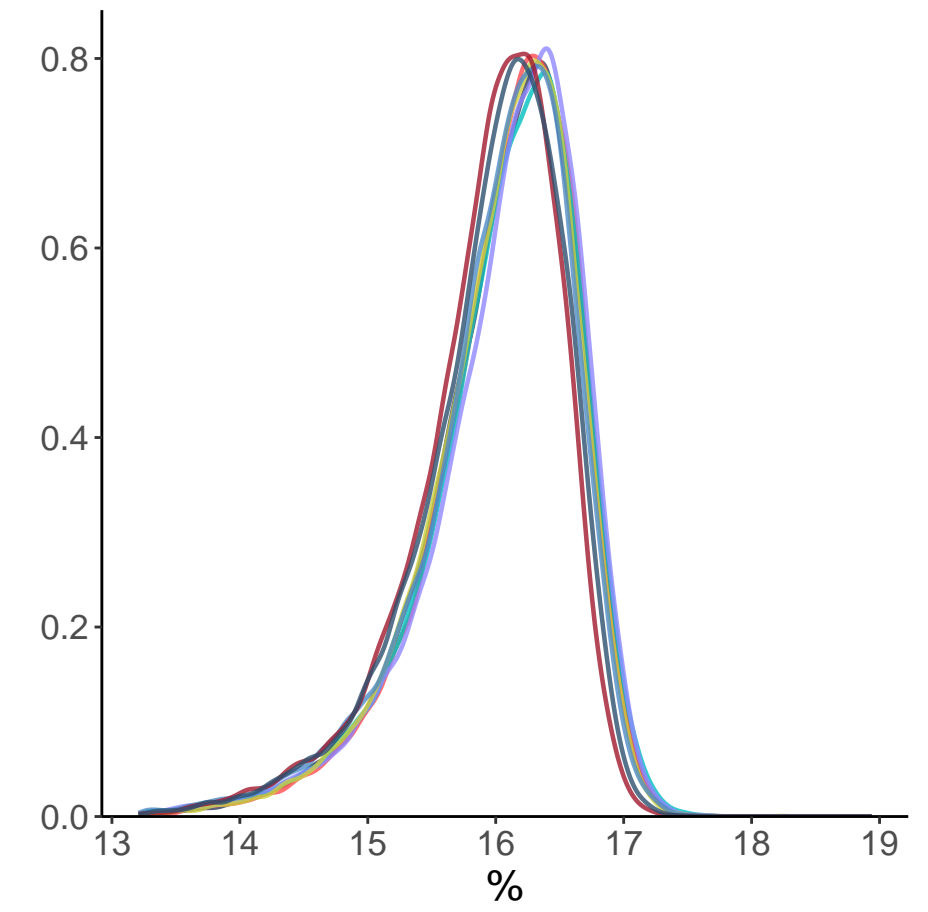
## XS\_VLDL\_CE\_pct

Spectrometer



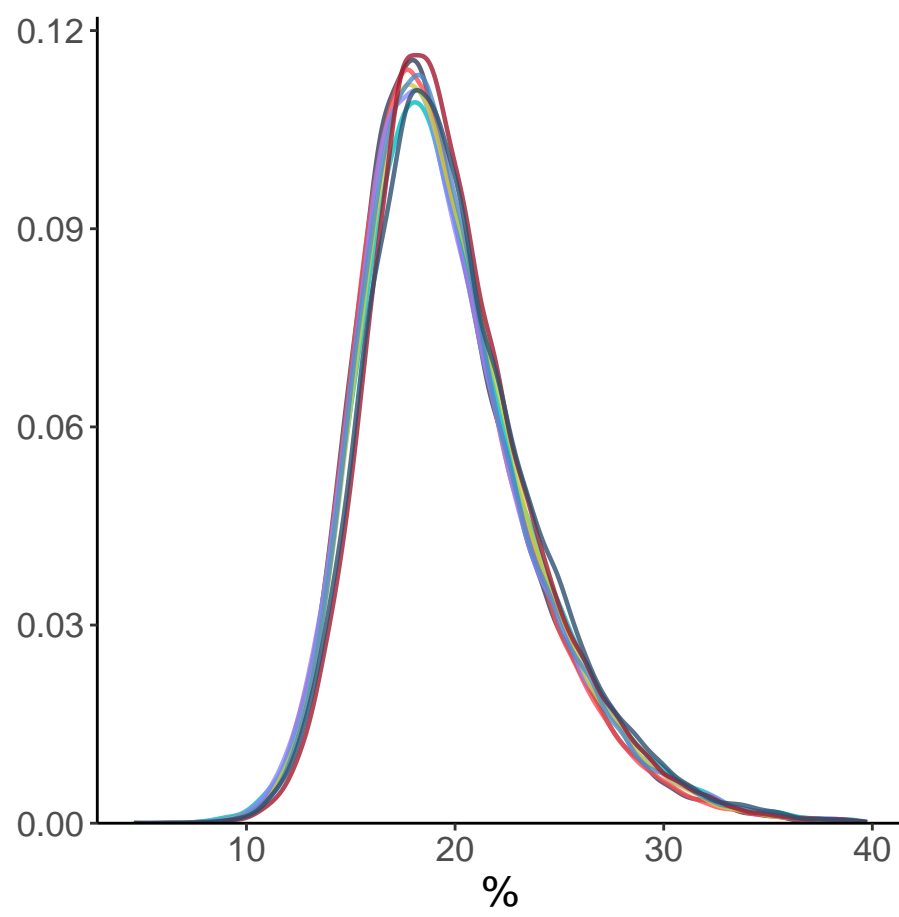
## XS\_VLDL\_FC\_pct

Spectrometer



## XS\_VLDL\_TG\_pct

Spectrometer

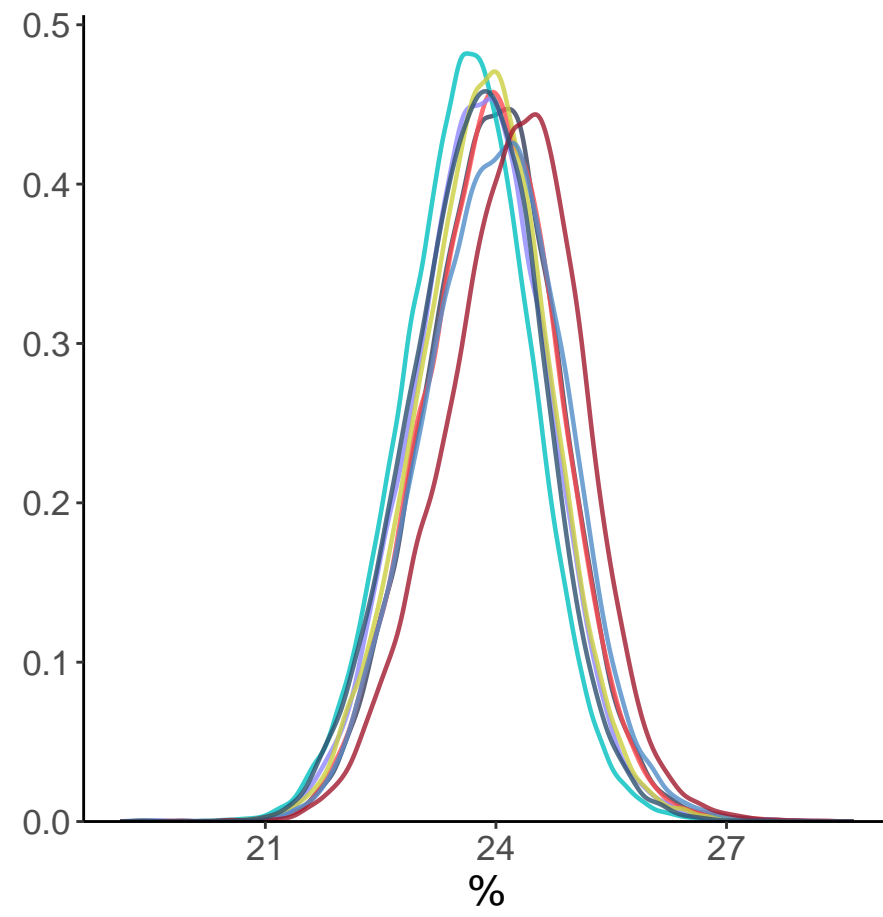




# IDL ratios

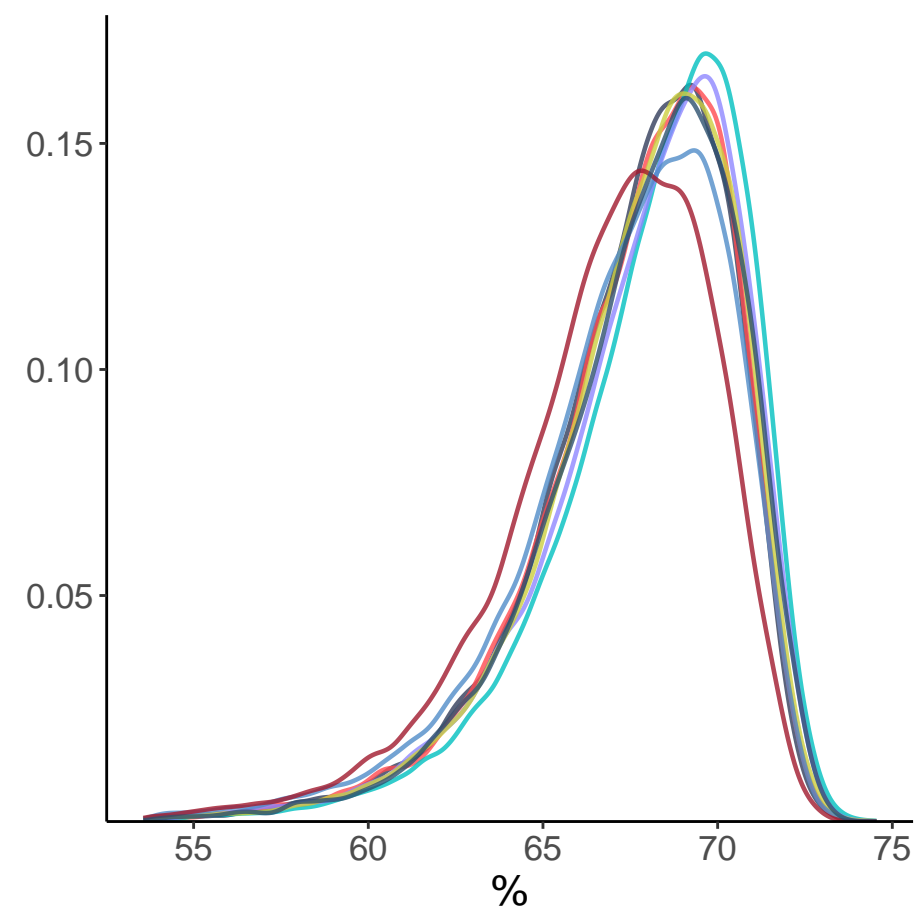
## IDL\_PL\_pct

Spectrometer



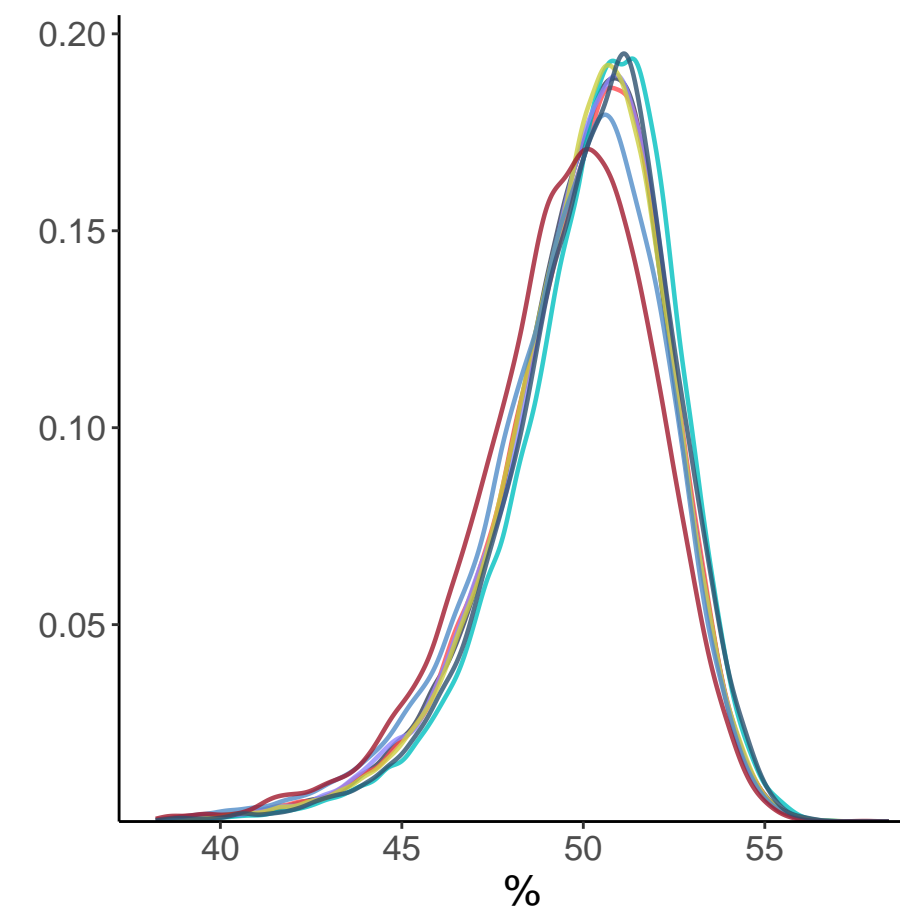
## IDL\_C\_pct

Spectrometer



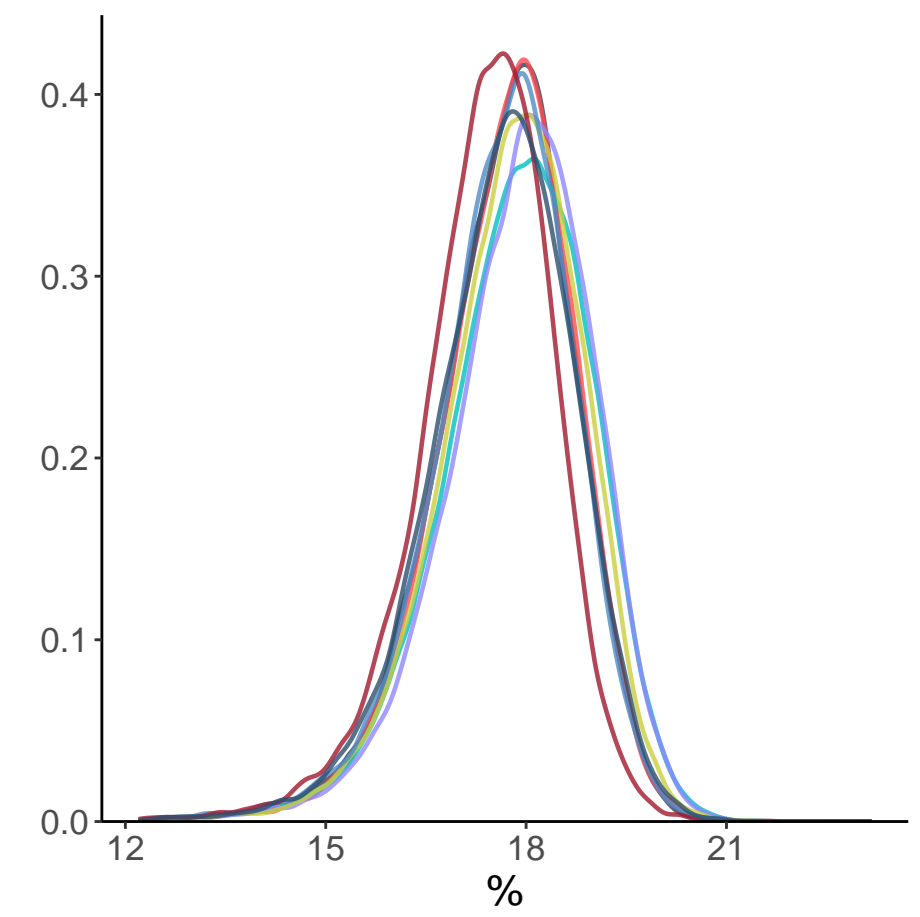
## IDL\_CE\_pct

Spectrometer



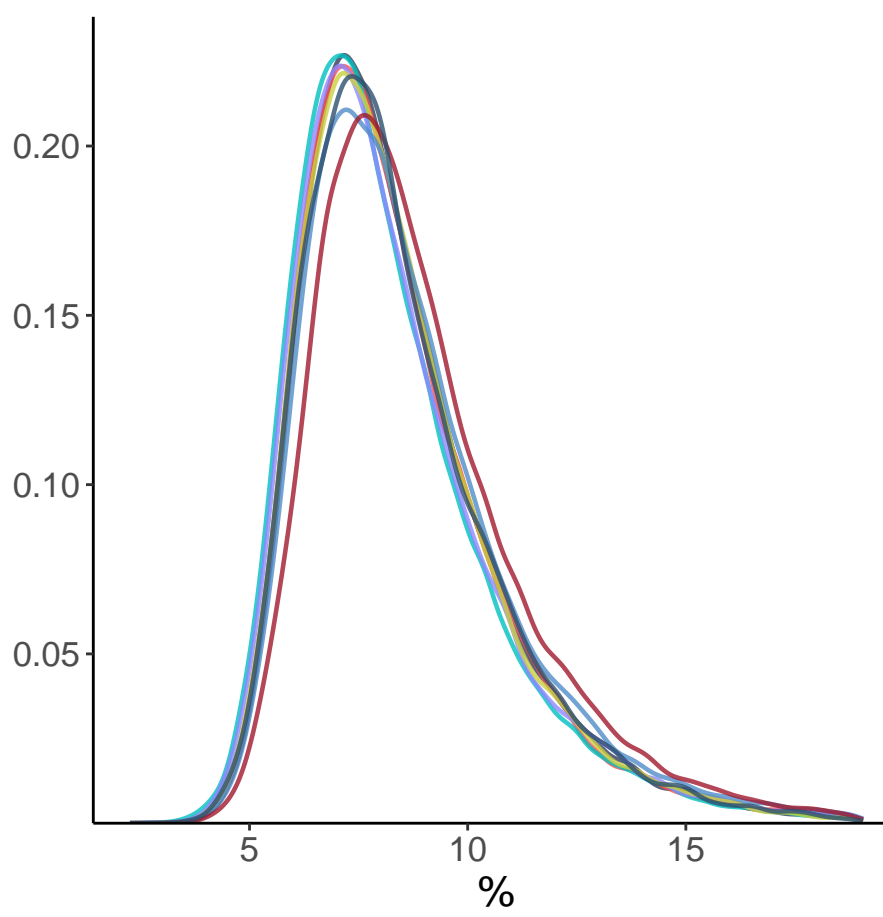
## IDL\_FC\_pct

Spectrometer



## IDL\_TG\_pct

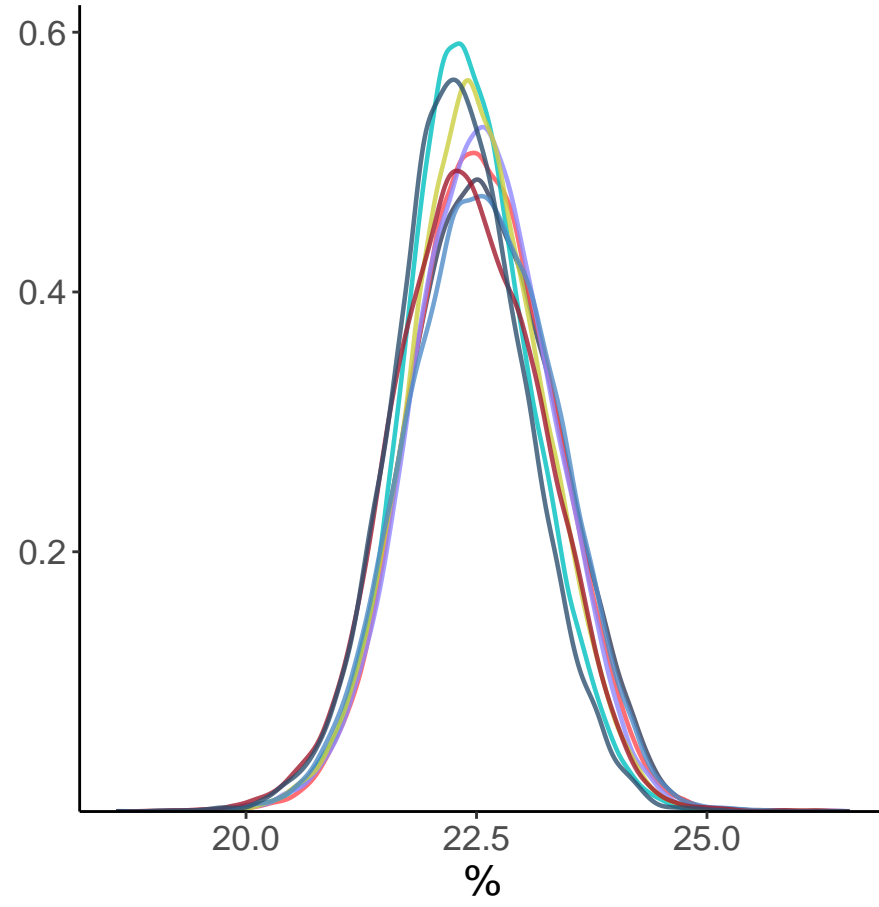
Spectrometer



# Large LDL ratios

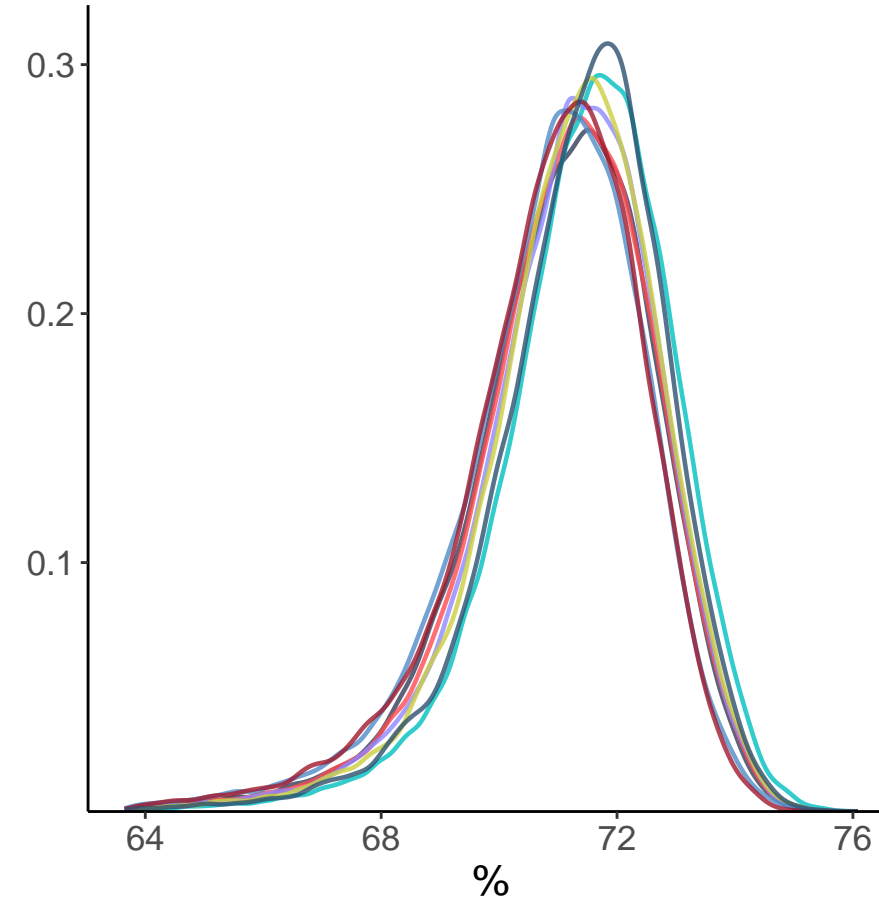
## L\_LDL\_PL\_pct

Spectrometer



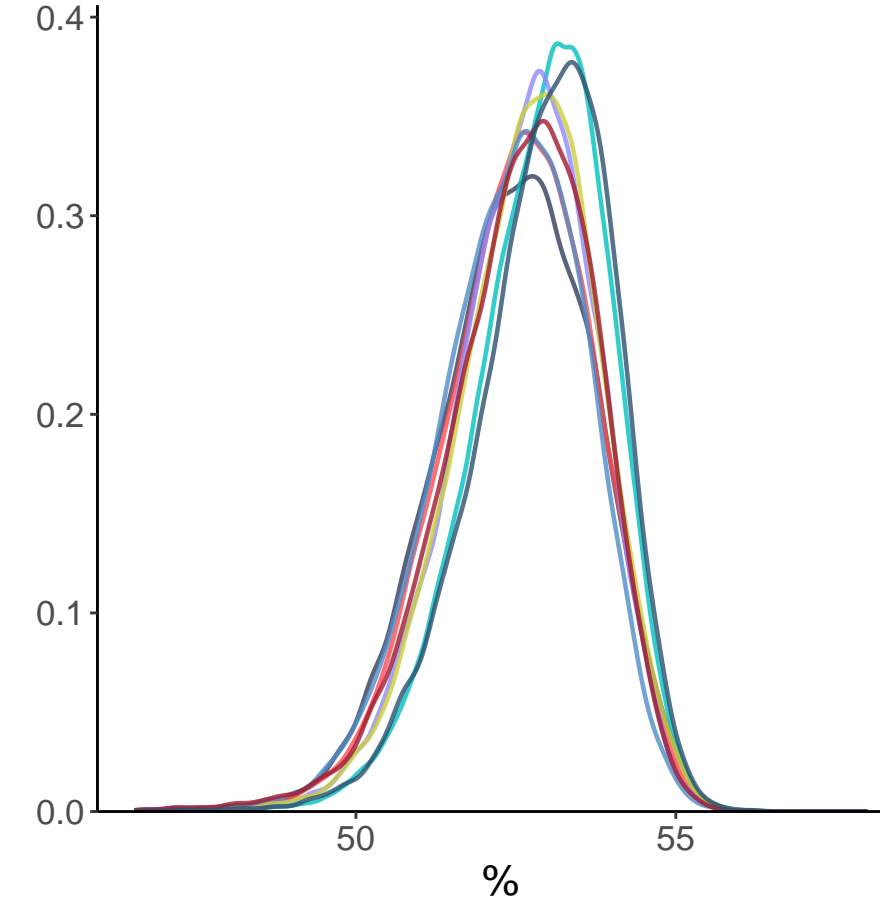
## L\_LDL\_C\_pct

Spectrometer



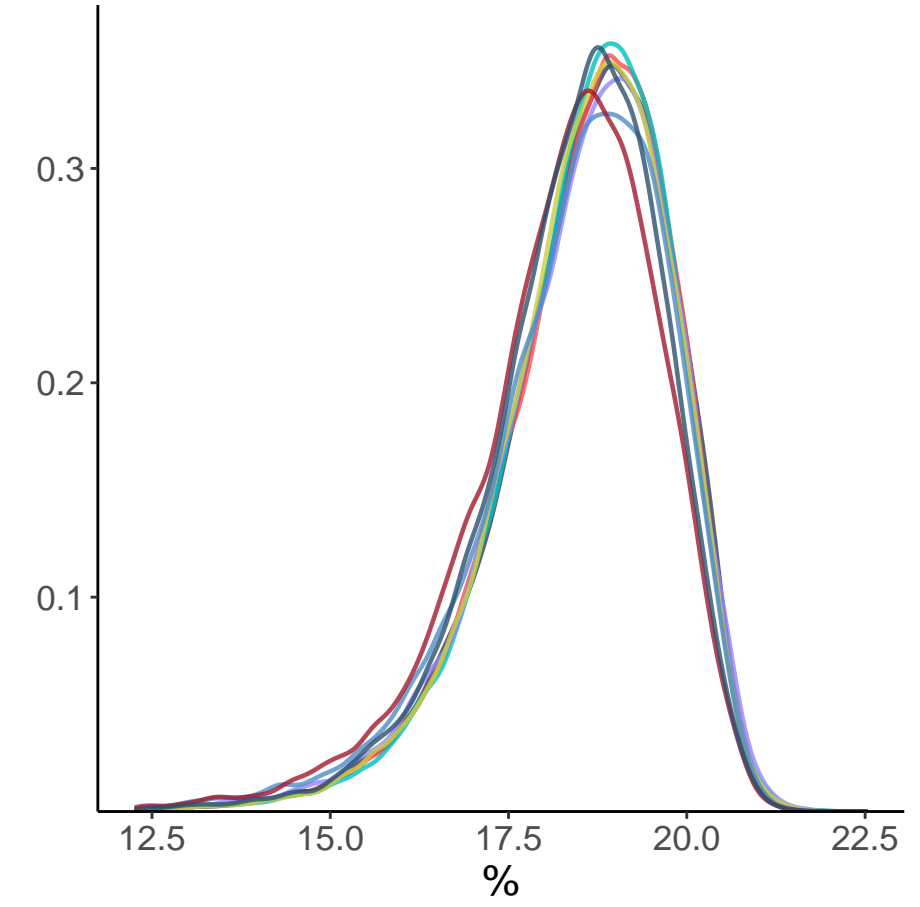
## L\_LDL\_CE\_pct

Spectrometer



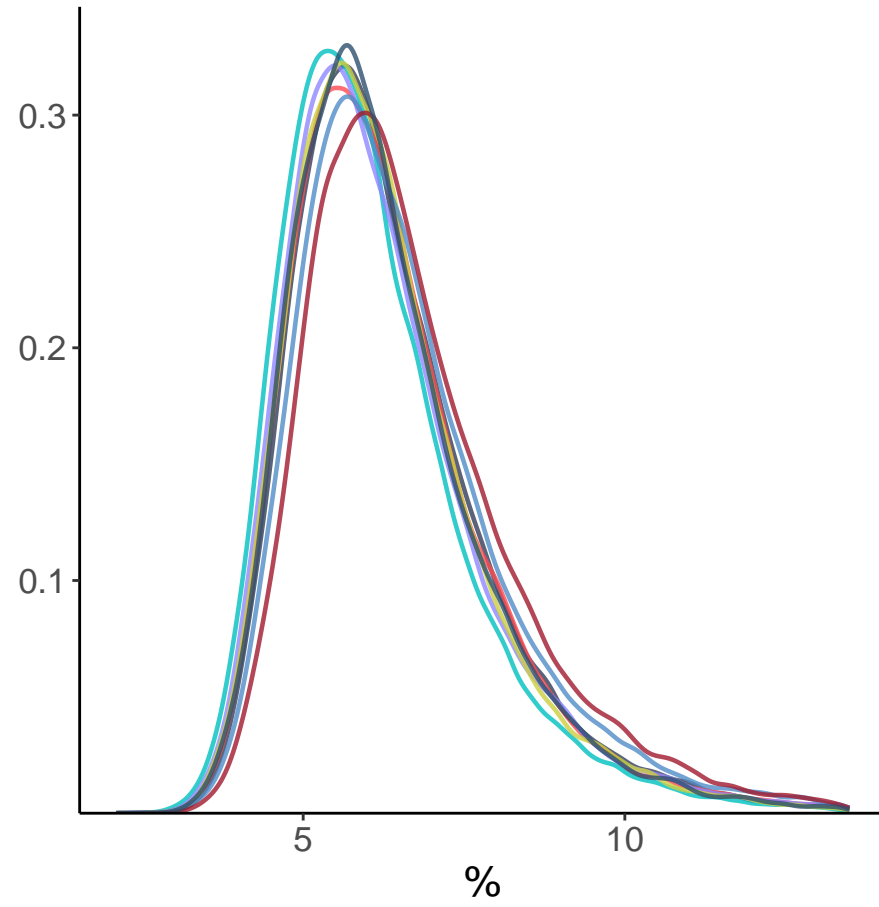
## L\_LDL\_FC\_pct

Spectrometer



## L\_LDL\_TG\_pct

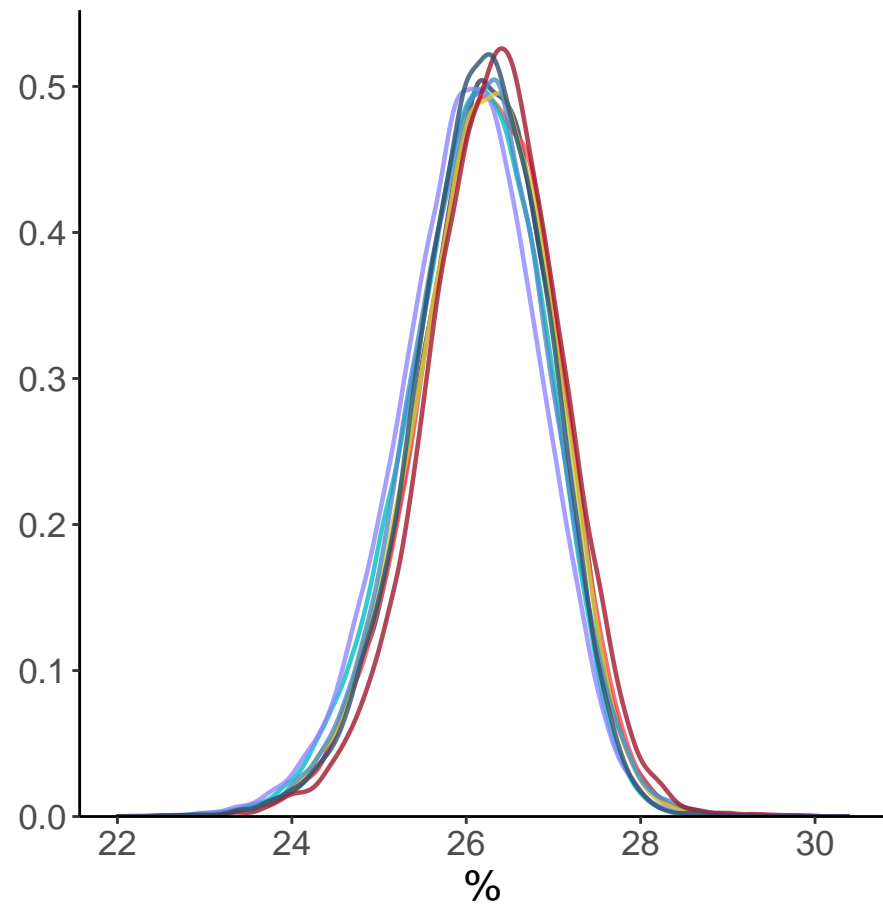
Spectrometer



# Medium LDL ratios

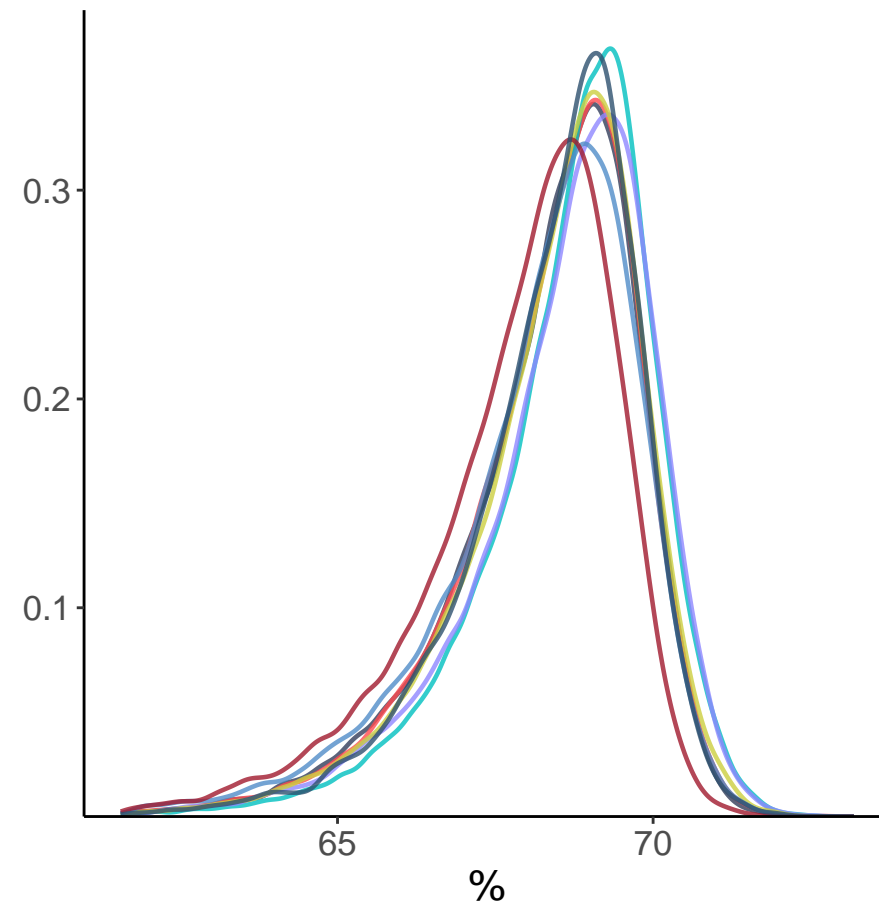
## M\_LDL\_PL\_pct

Spectrometer



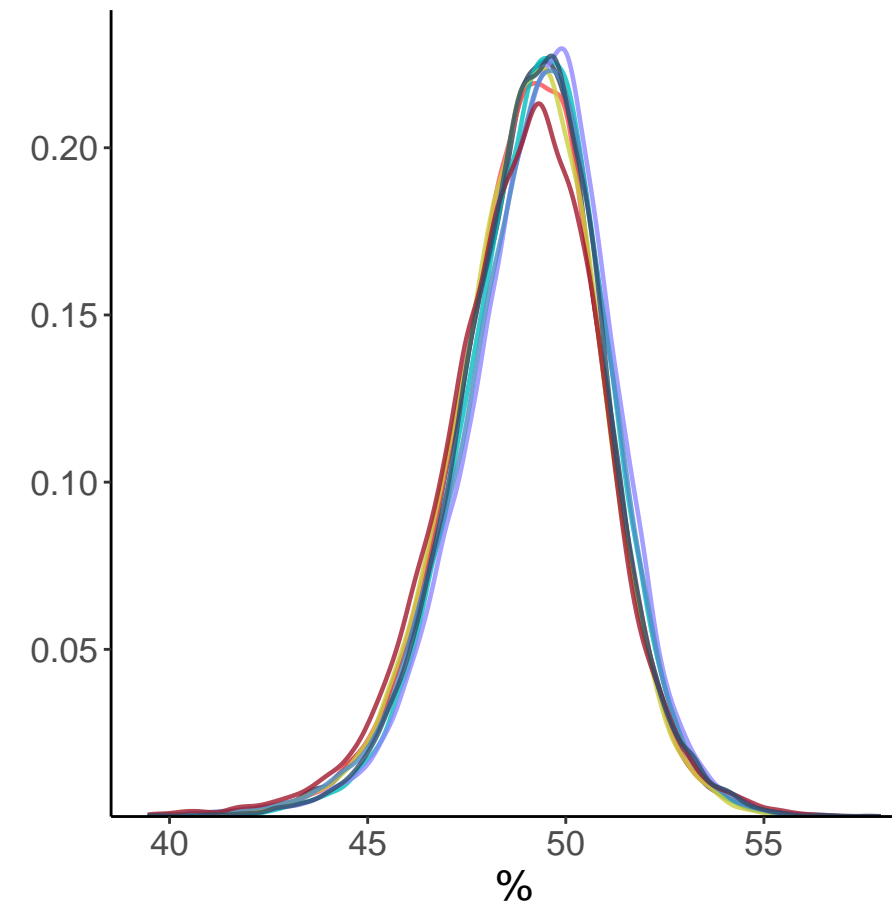
## M\_LDL\_C\_pct

Spectrometer



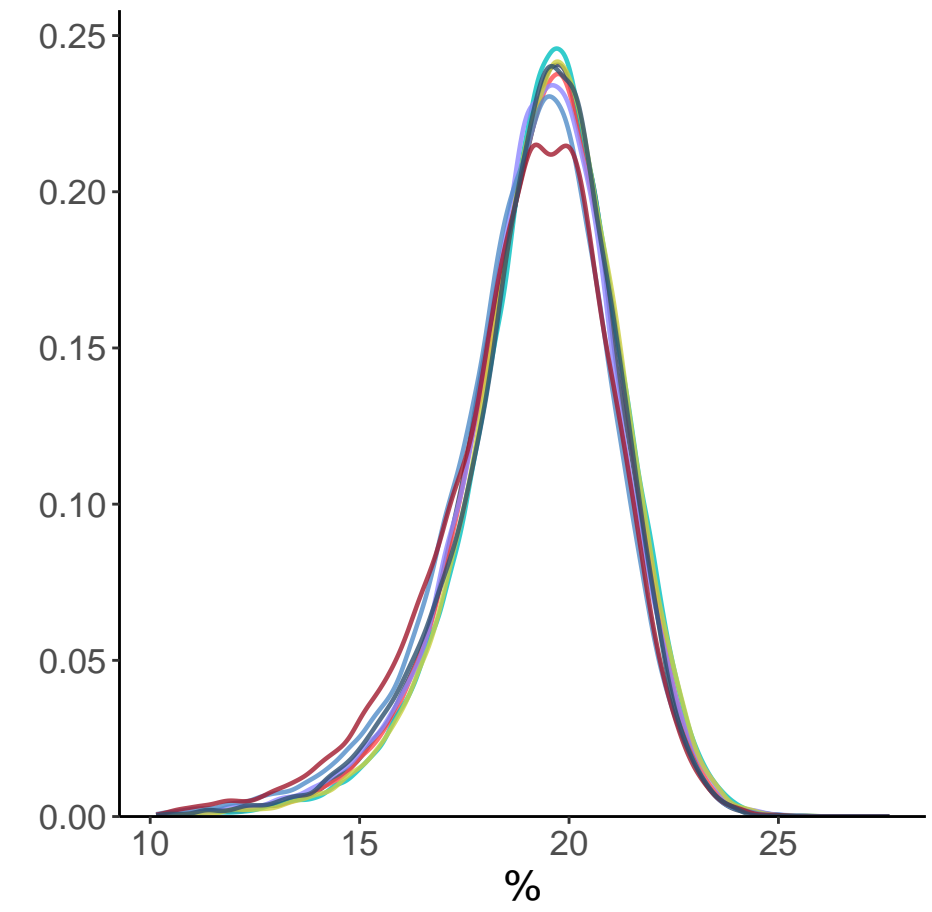
## M\_LDL\_CE\_pct

Spectrometer



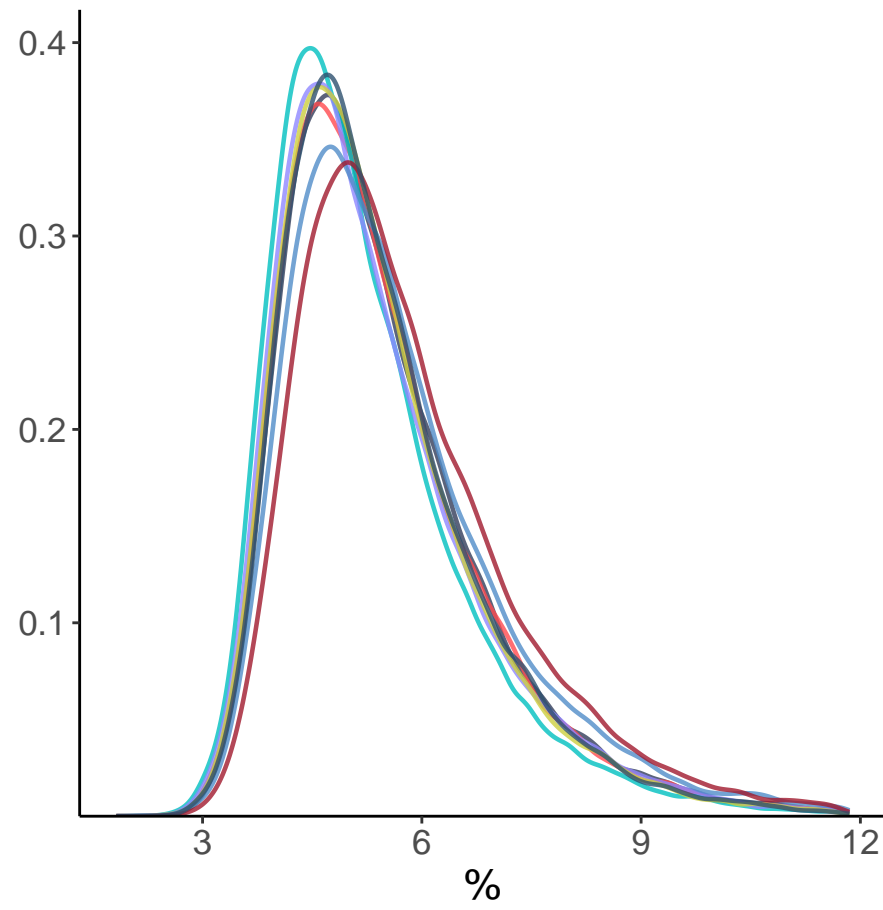
## M\_LDL\_FC\_pct

Spectrometer



## M\_LDL\_TG\_pct

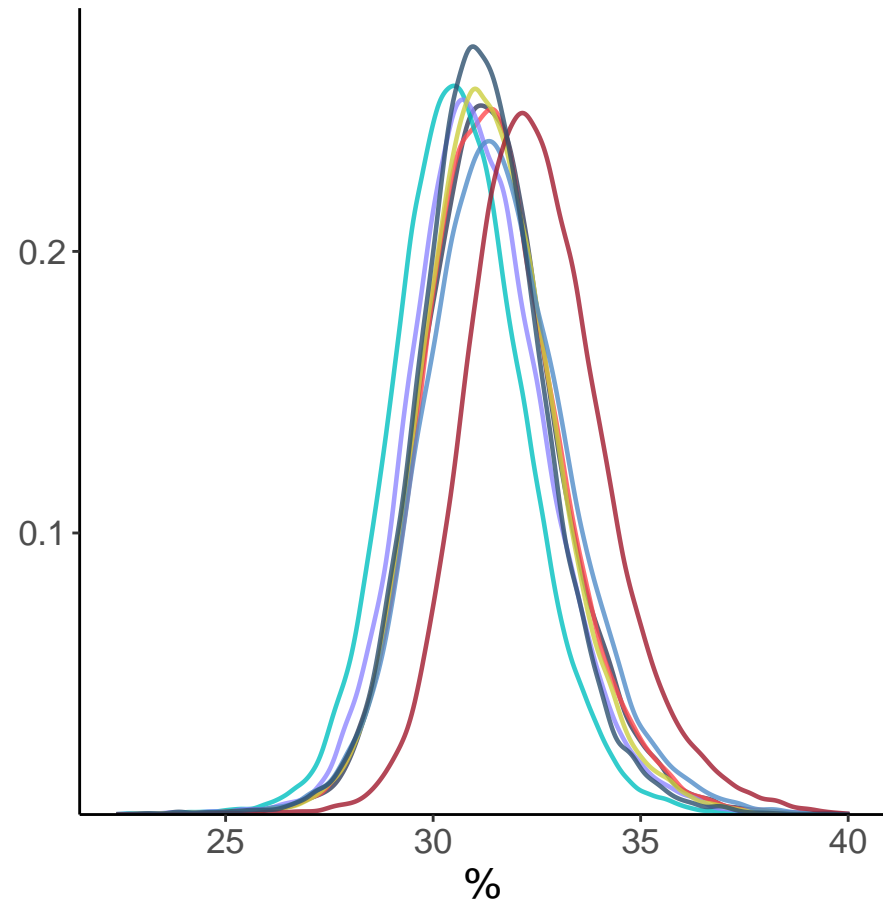
Spectrometer



# Small LDL ratios

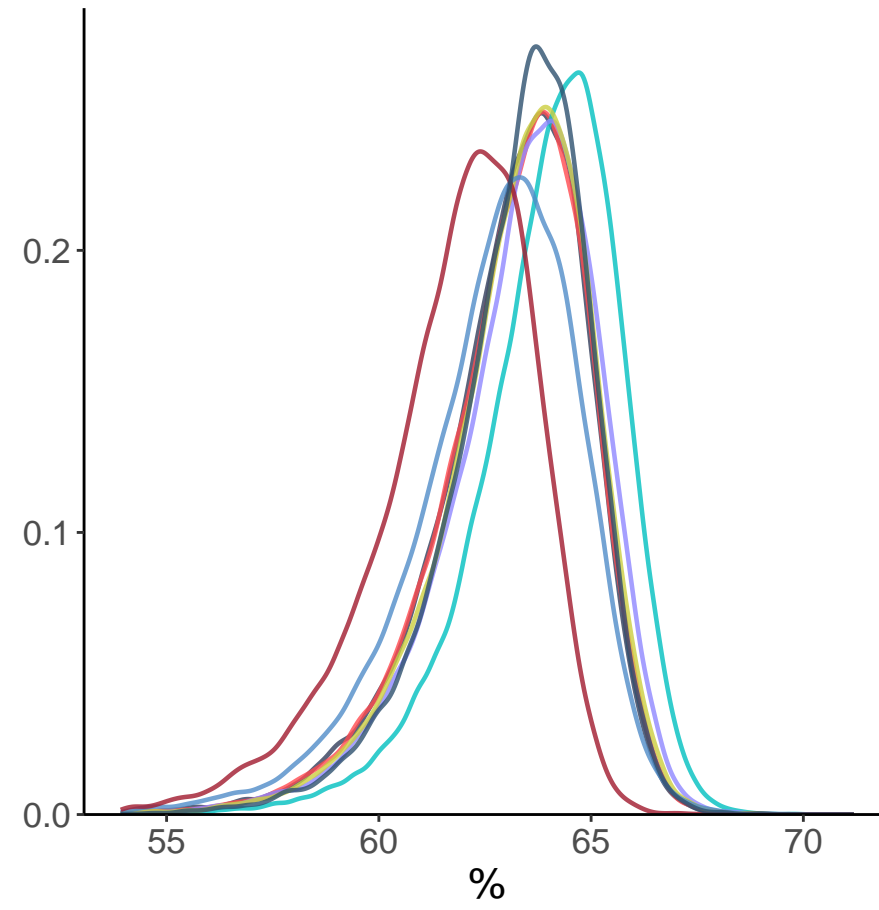
## S\_LDL\_PL\_pct

Spectrometer



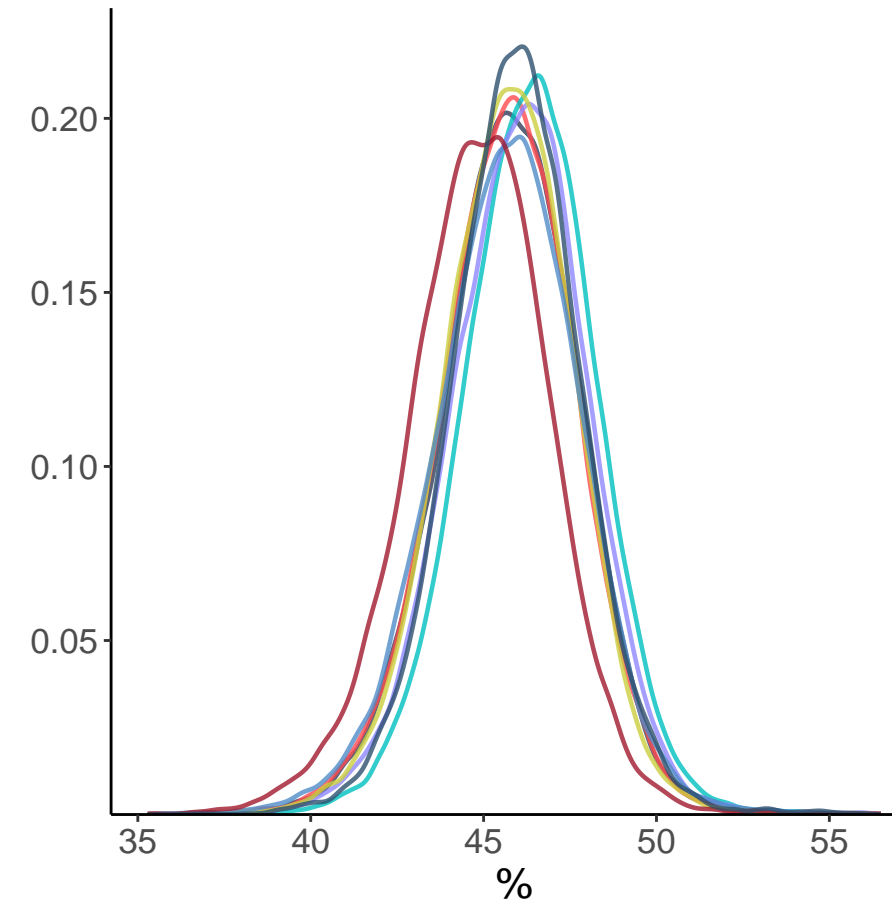
## S\_LDL\_C\_pct

Spectrometer



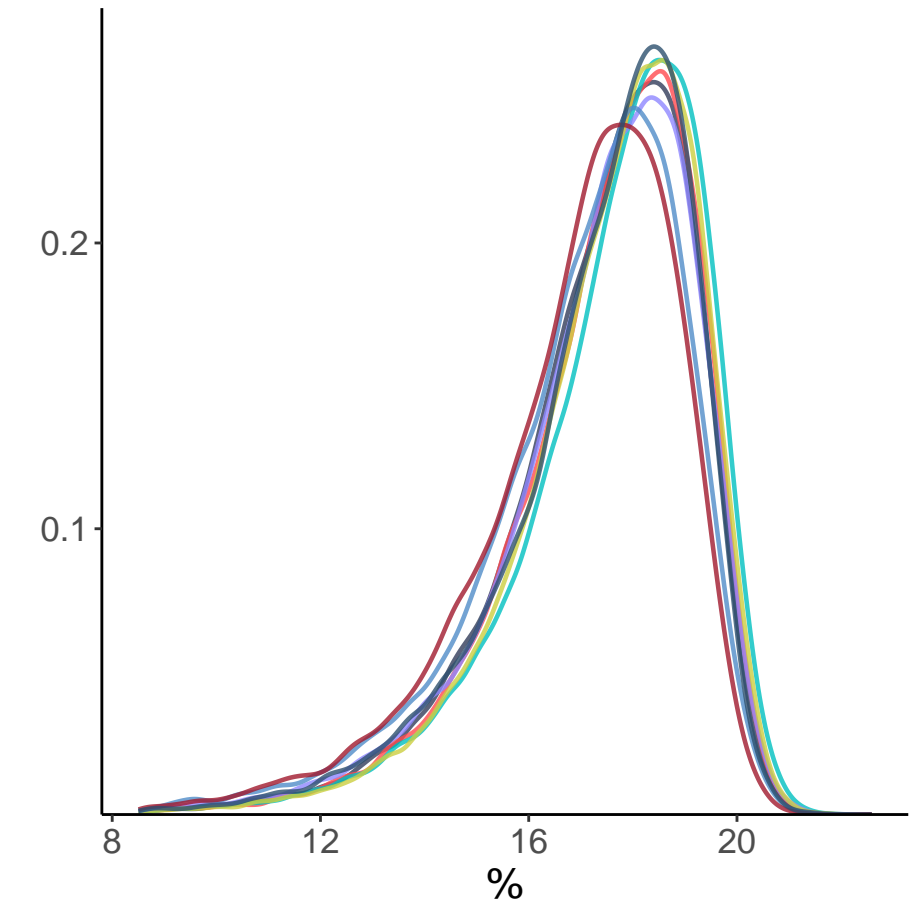
## S\_LDL\_CE\_pct

Spectrometer



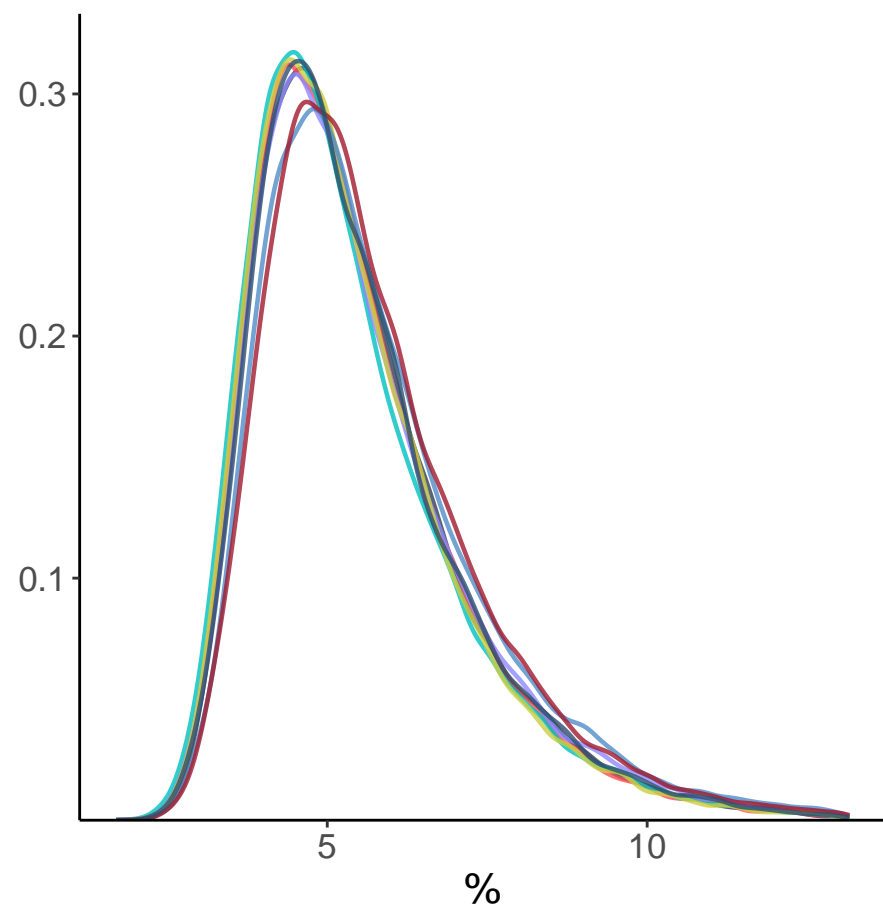
## S\_LDL\_FC\_pct

Spectrometer



## S\_LDL\_TG\_pct

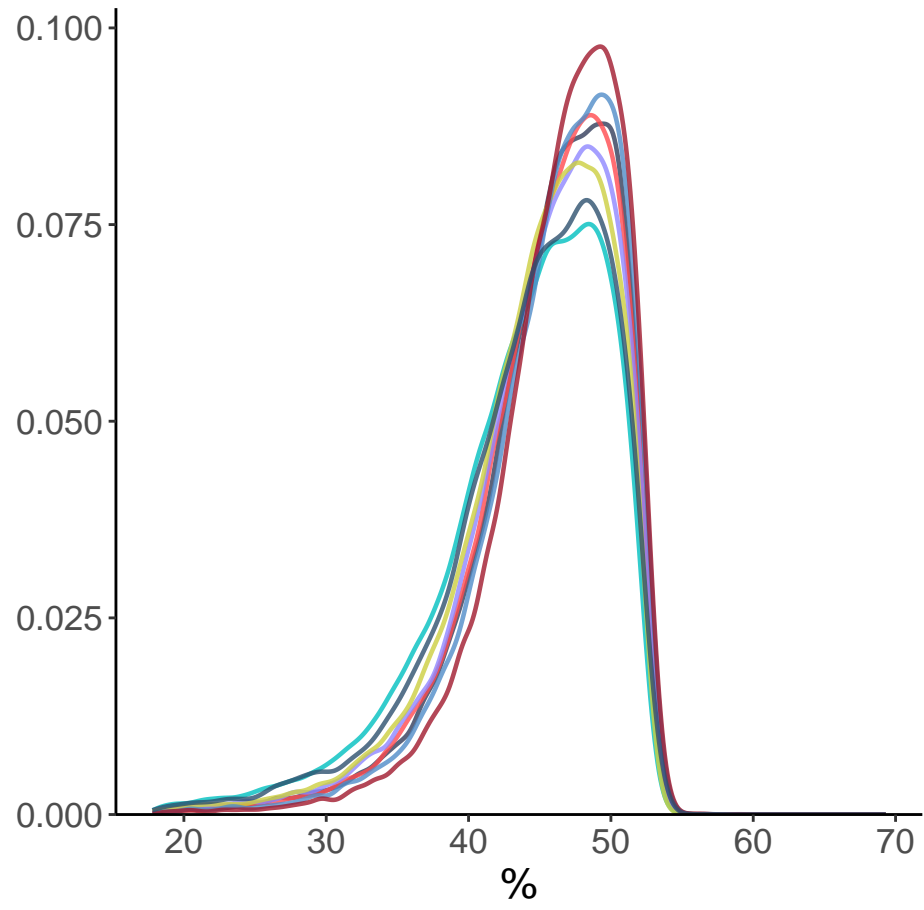
Spectrometer



# Very large HDL ratios

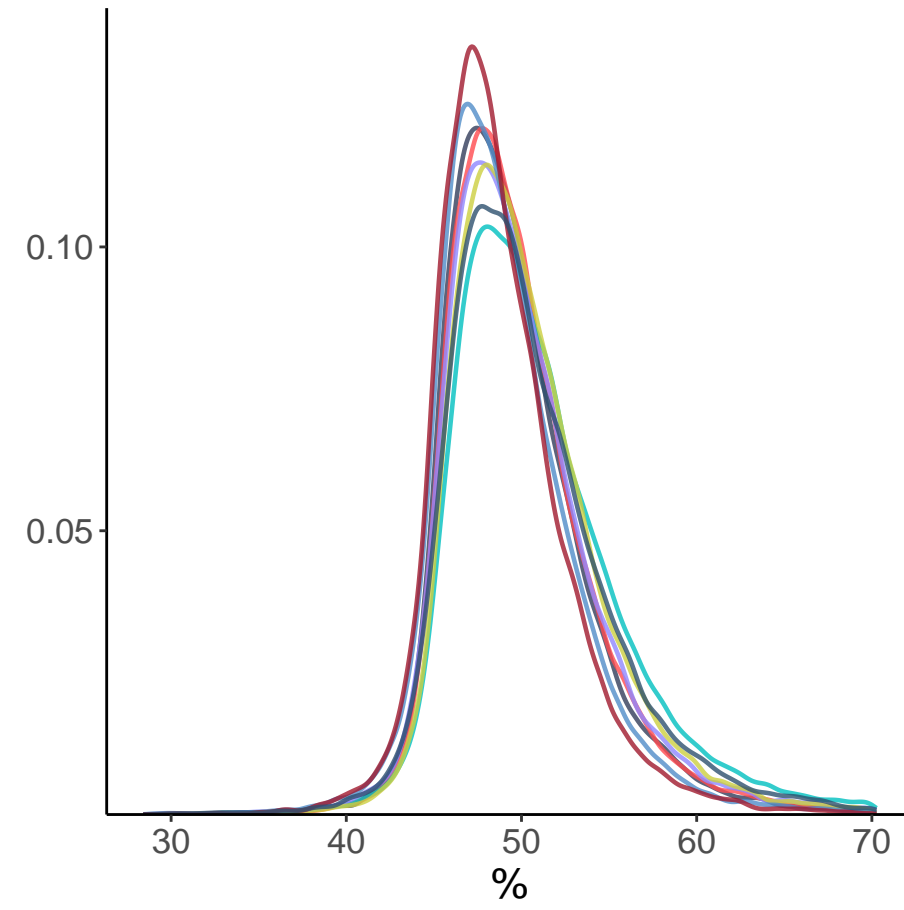
## XL\_HDL\_PL\_pct

Spectrometer



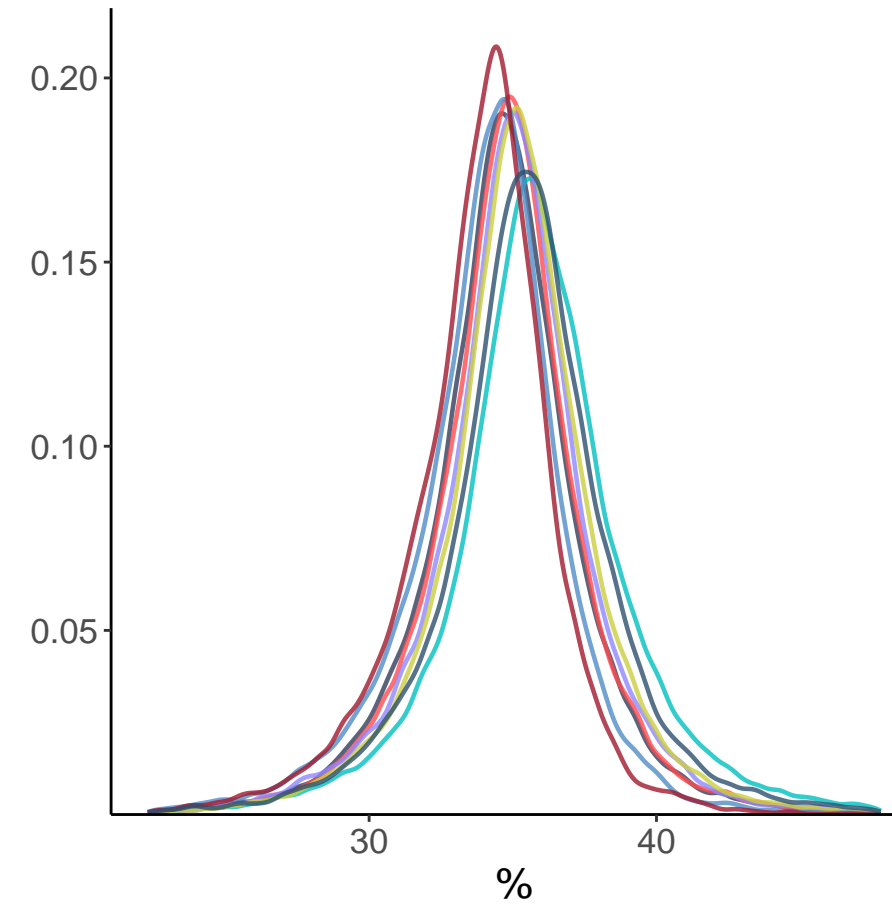
## XL\_HDL\_C\_pct

Spectrometer



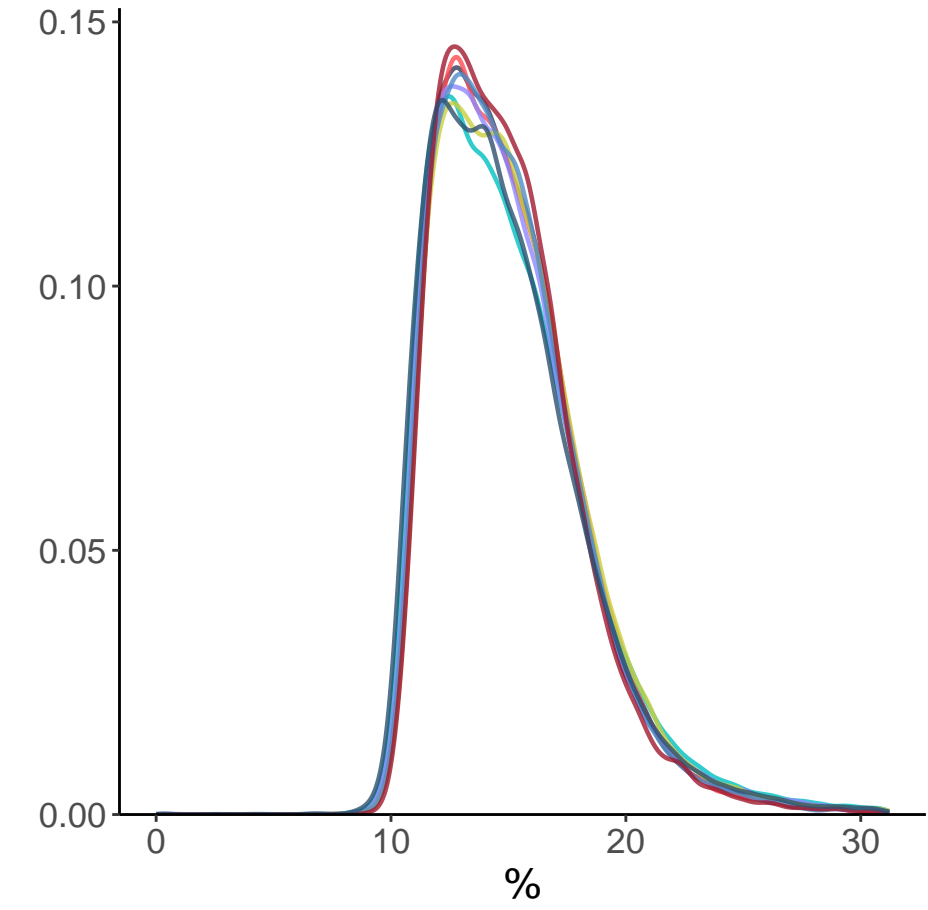
## XL\_HDL\_CE\_pct

Spectrometer



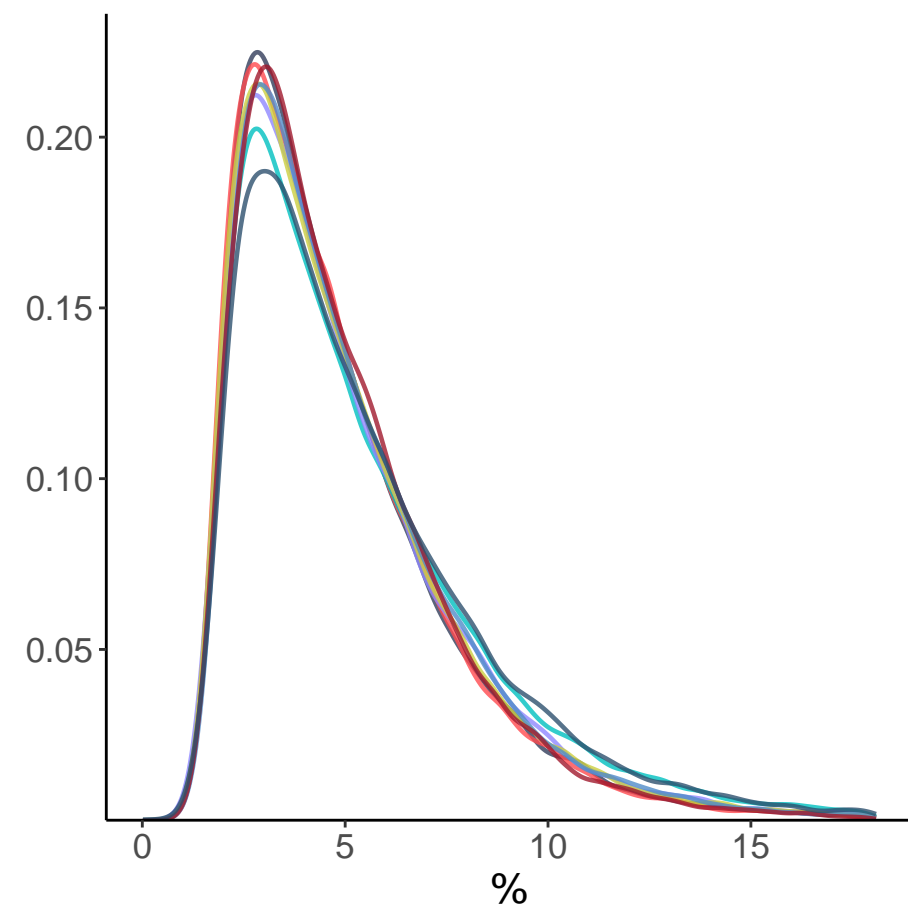
## XL\_HDL\_FC\_pct

Spectrometer



## XL\_HDL\_TG\_pct

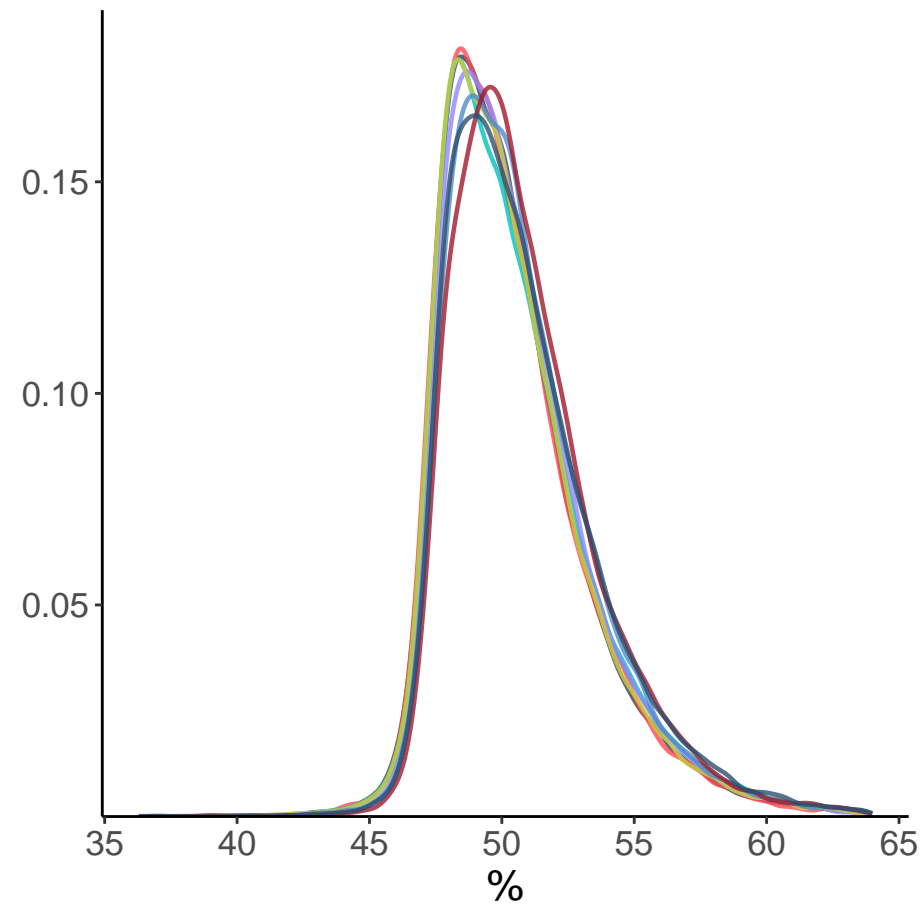
Spectrometer



# Large HDL ratios

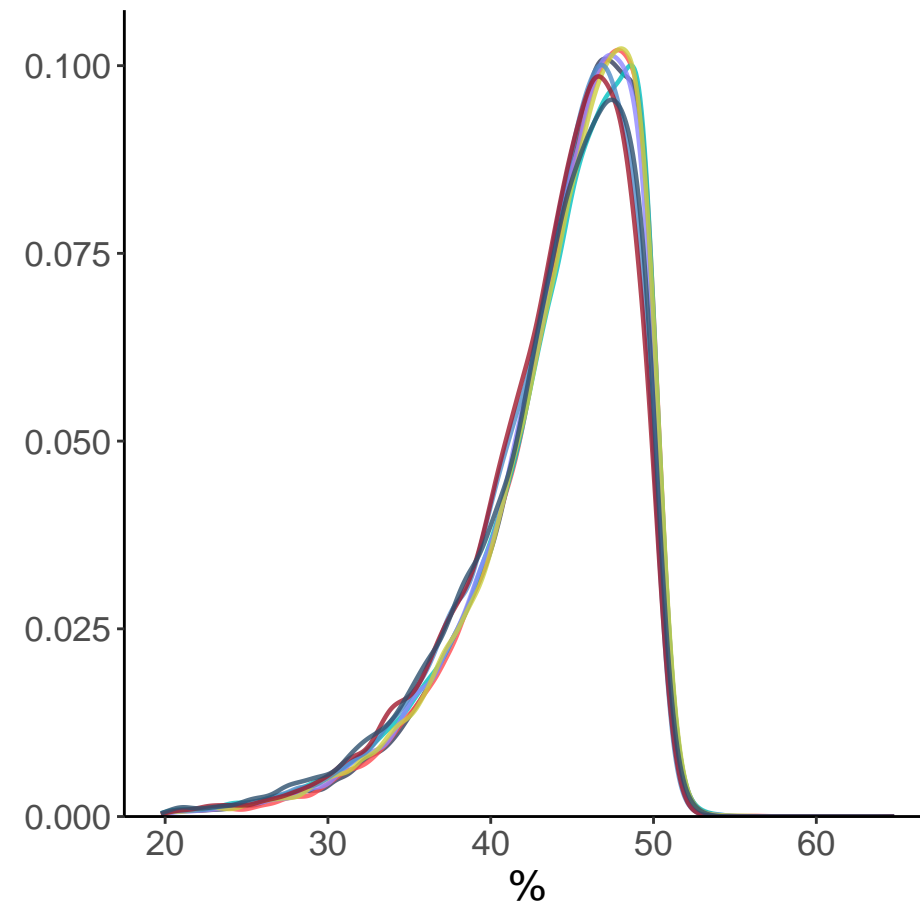
## L\_HDL\_PL\_pct

Spectrometer



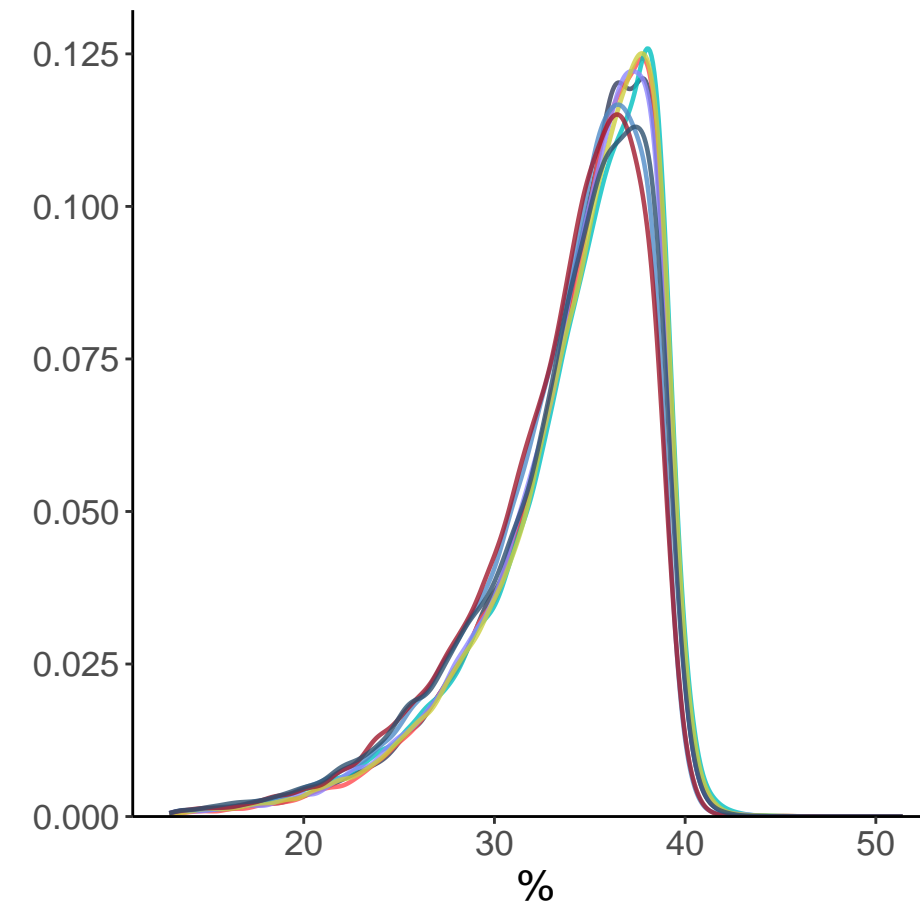
## L\_HDL\_C\_pct

Spectrometer



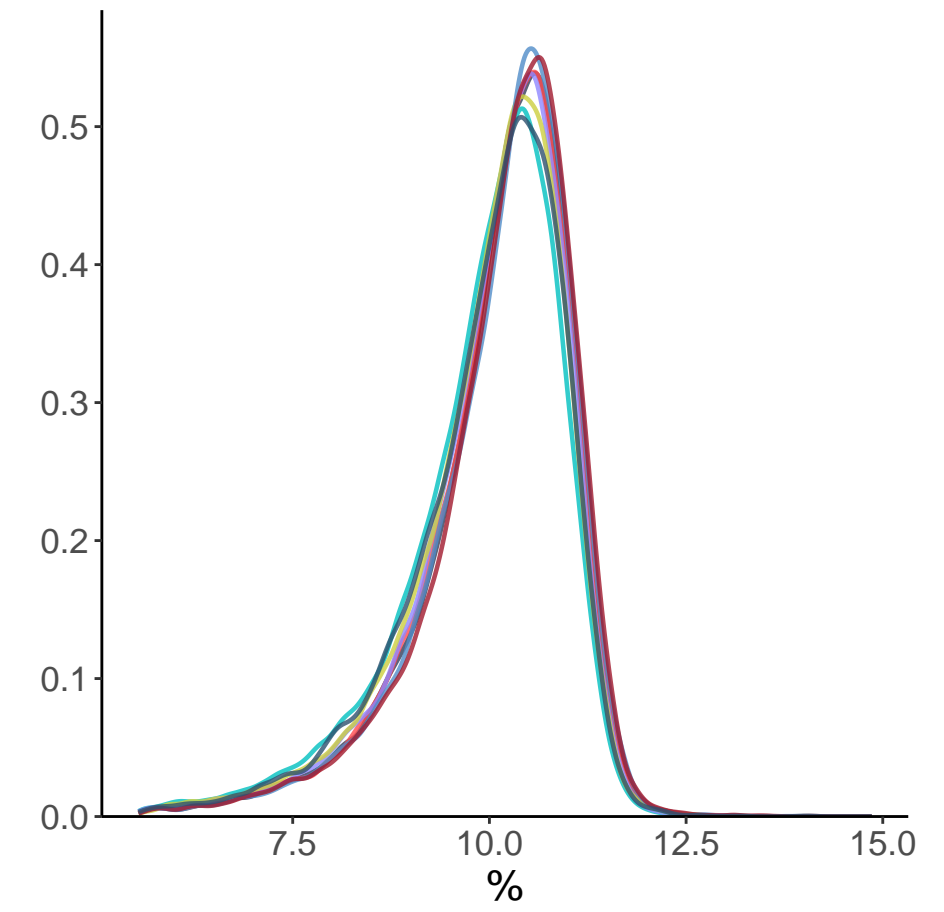
## L\_HDL\_CE\_pct

Spectrometer



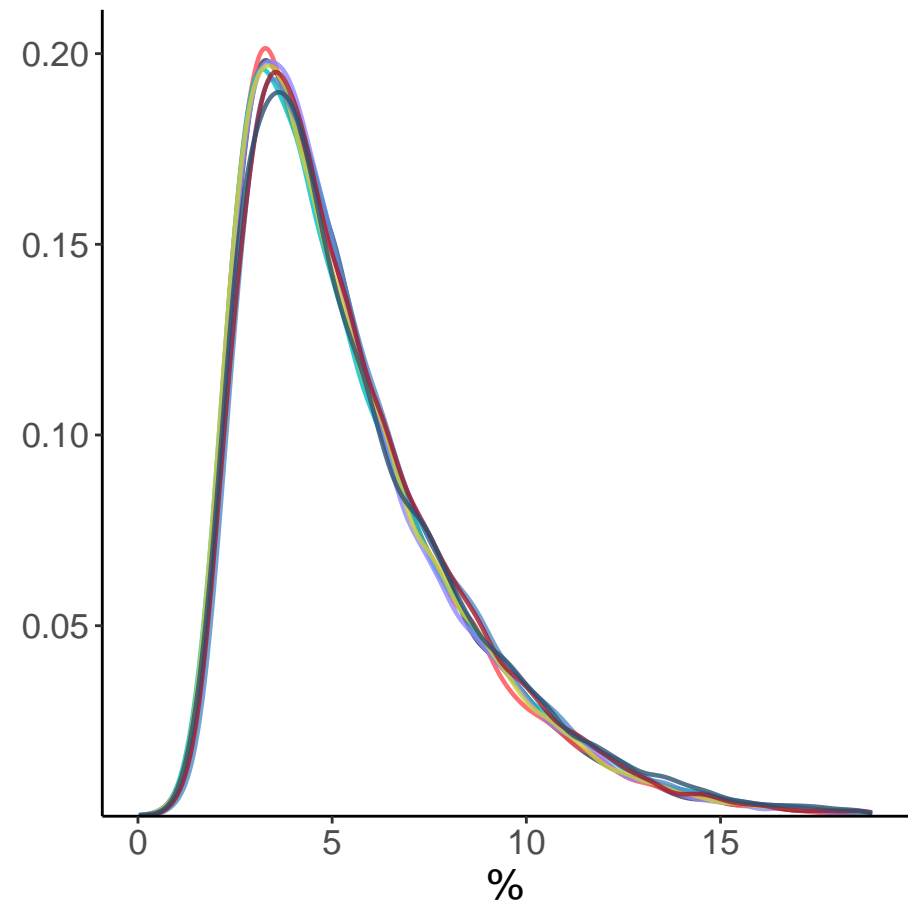
## L\_HDL\_FC\_pct

Spectrometer



## L\_HDL\_TG\_pct

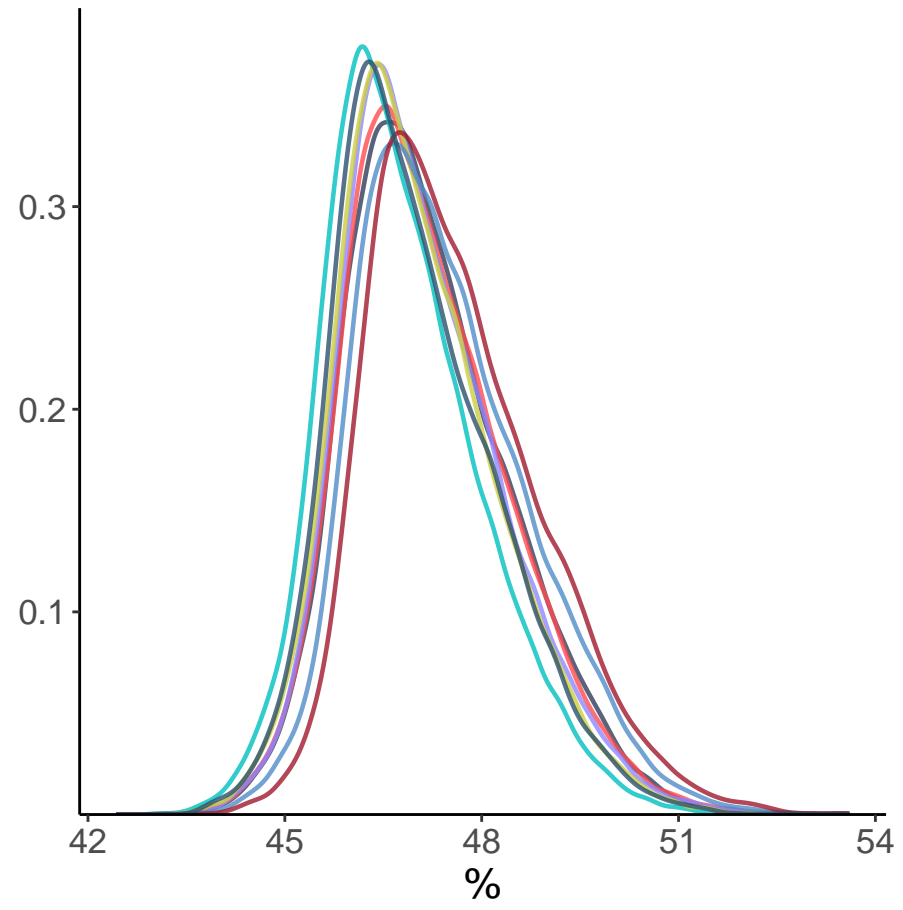
Spectrometer



# Medium HDL ratios

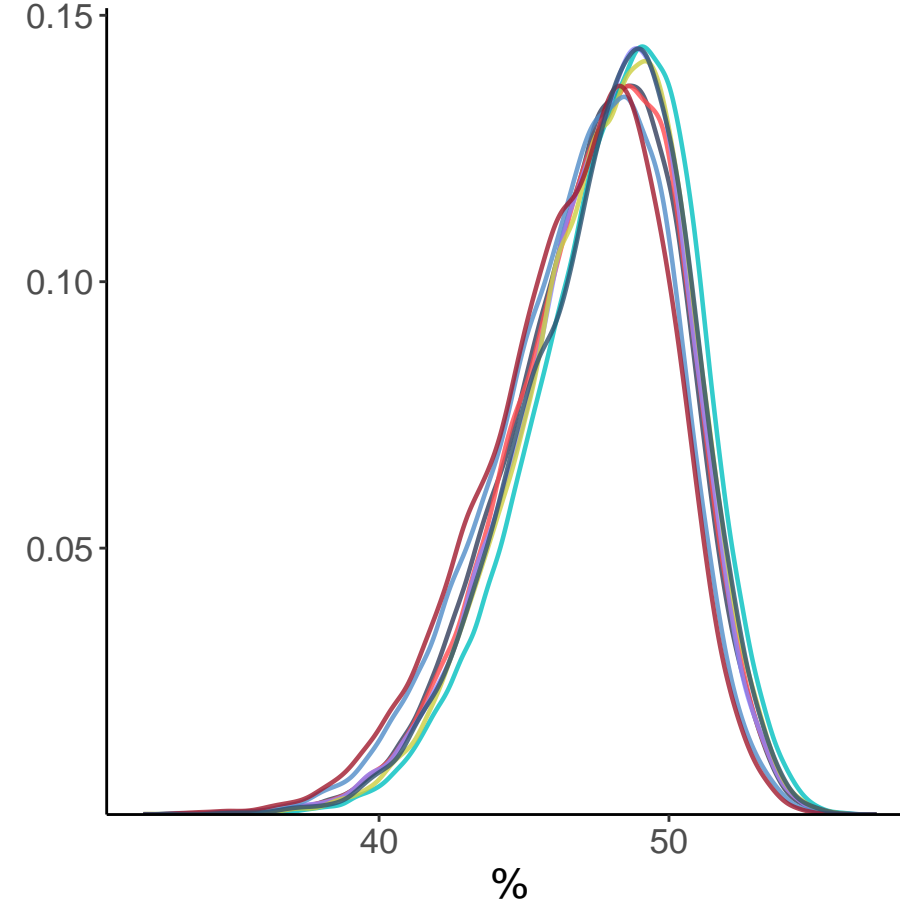
## M\_HDL\_PL\_pct

Spectrometer



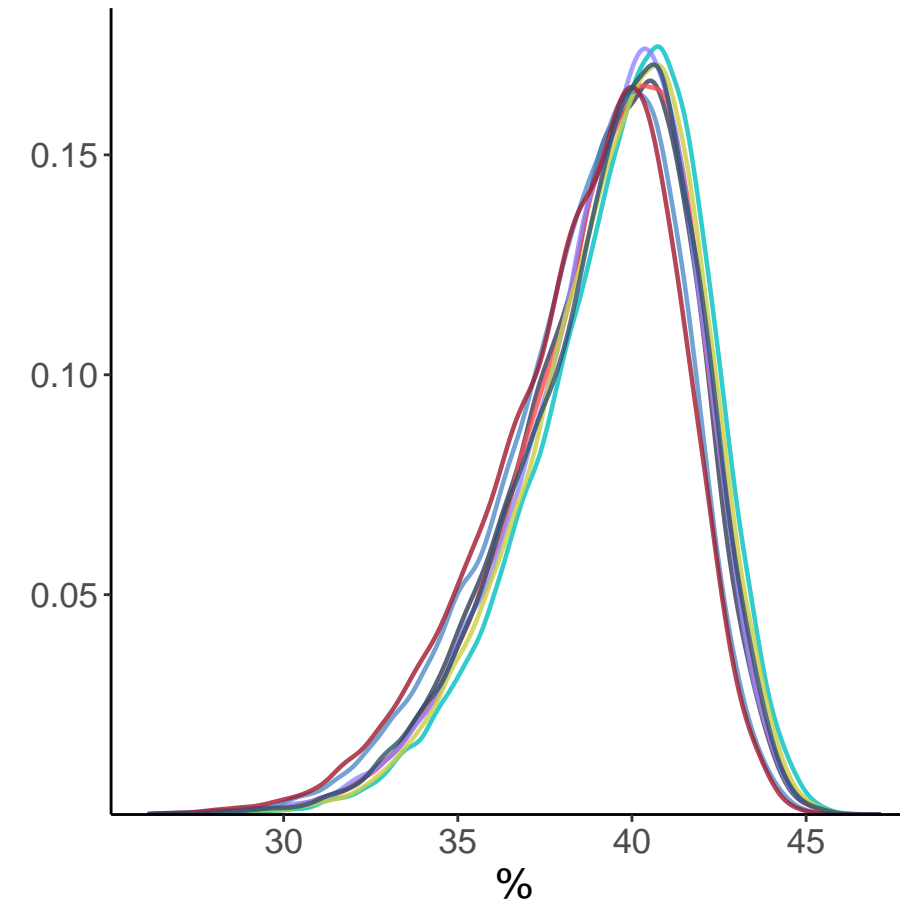
## M\_HDL\_C\_pct

Spectrometer



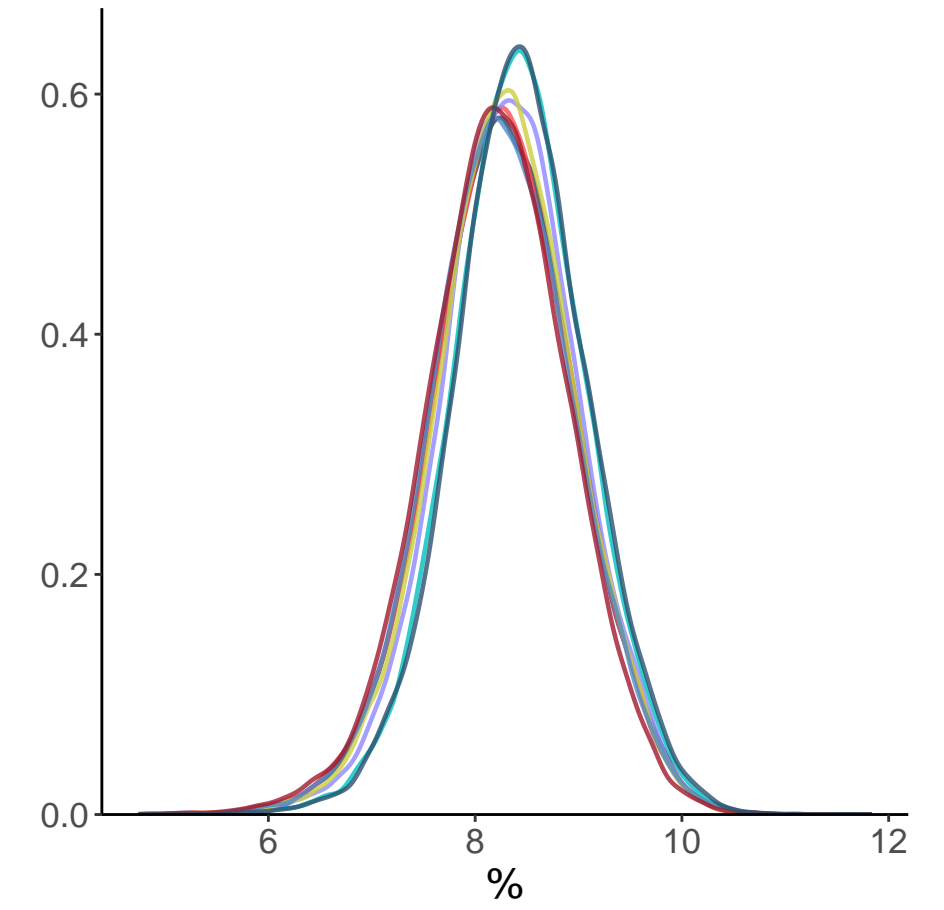
## M\_HDL\_CE\_pct

Spectrometer



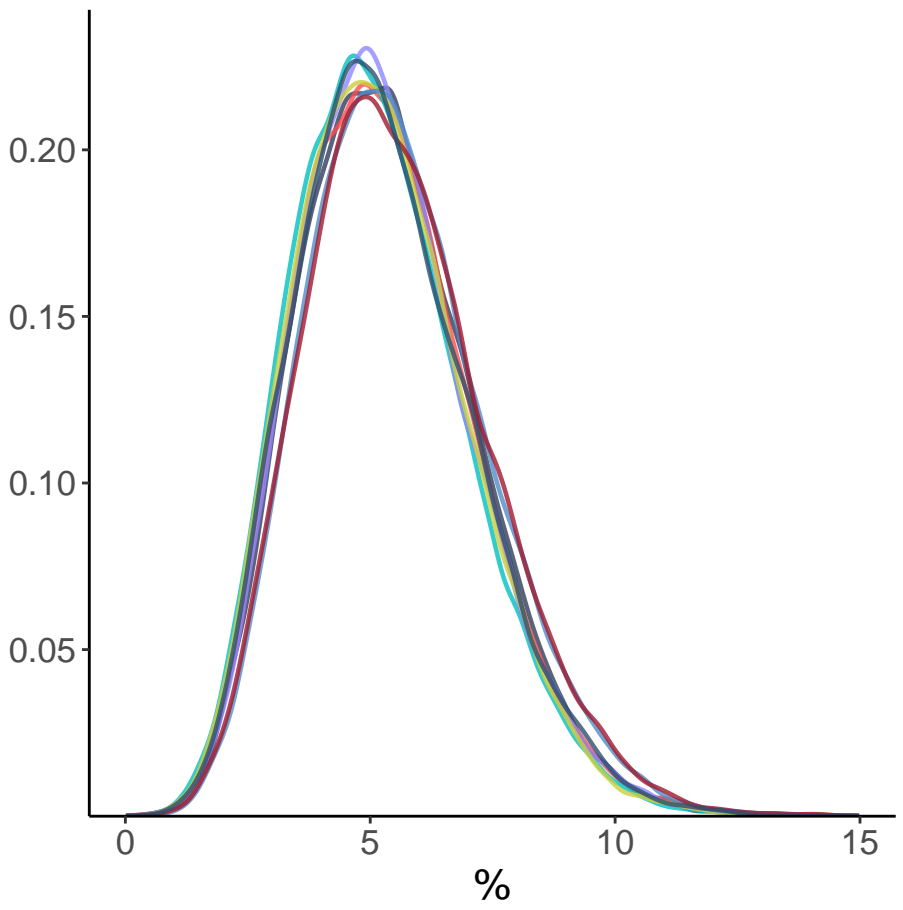
## M\_HDL\_FC\_pct

Spectrometer



## M\_HDL\_TG\_pct

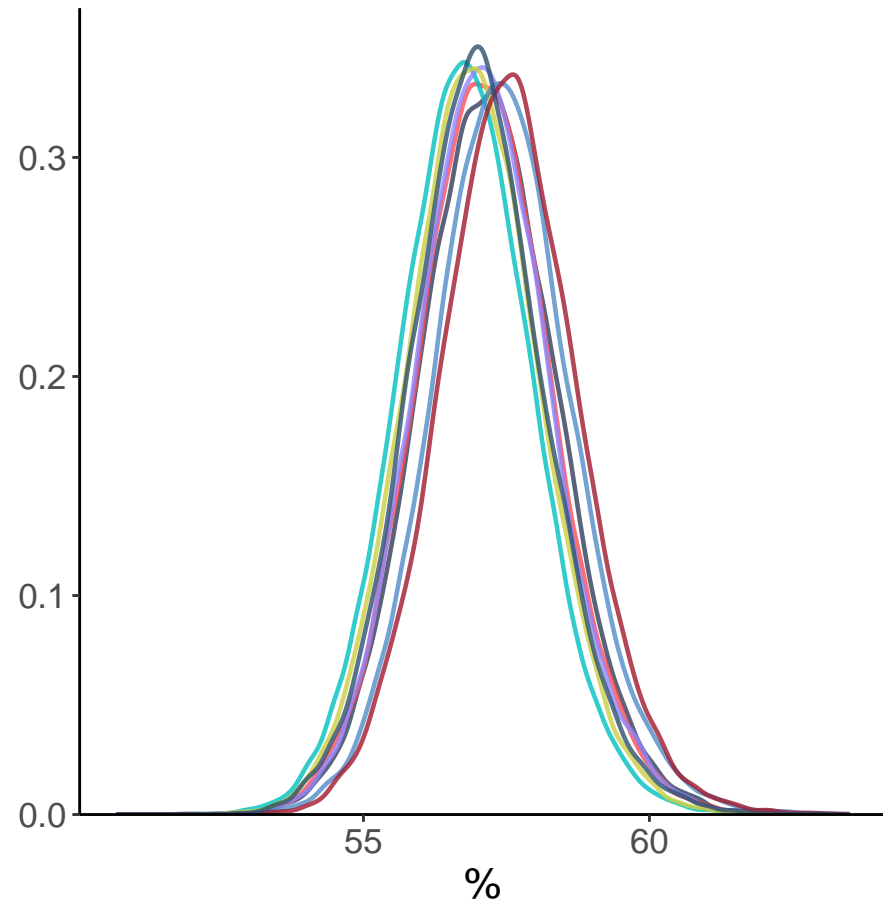
Spectrometer



# Small HDL ratios

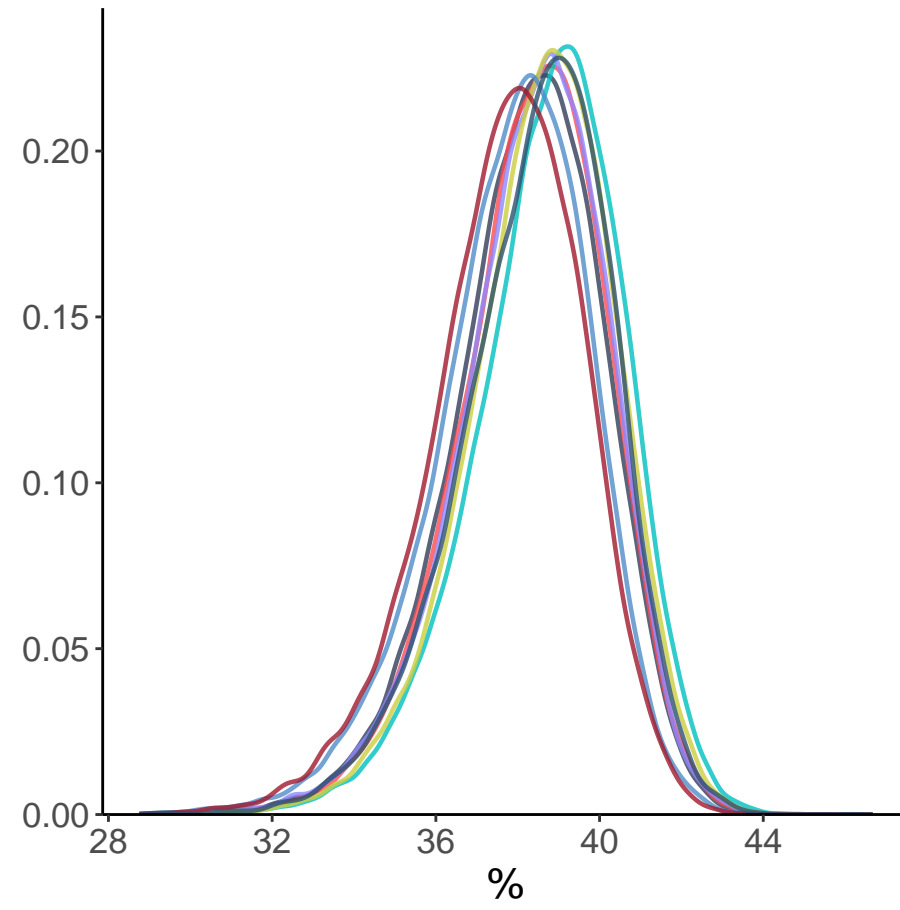
## S\_HDL\_PL\_pct

Spectrometer



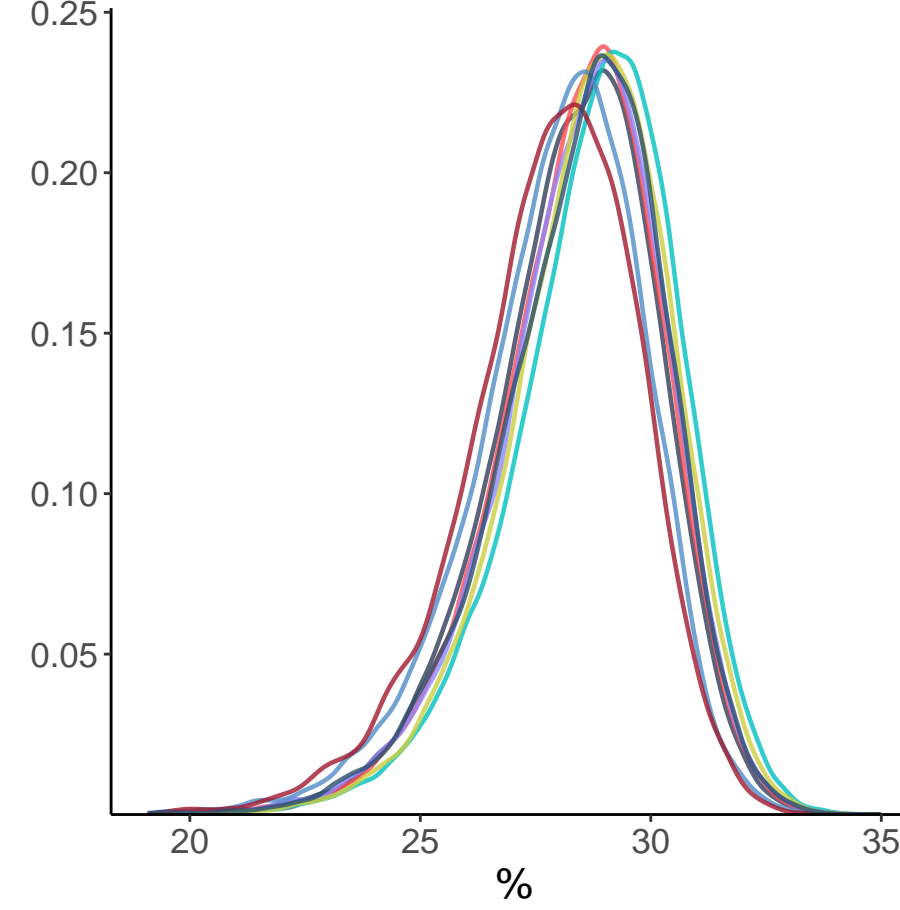
## S\_HDL\_C\_pct

Spectrometer



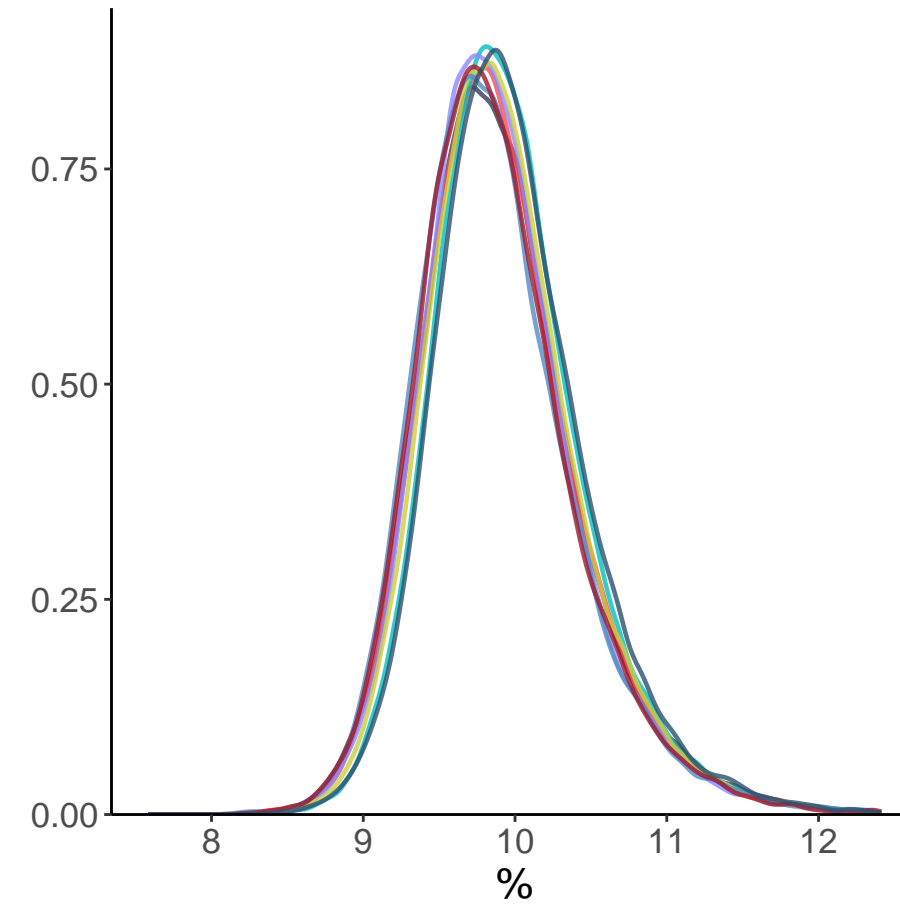
## S\_HDL\_CE\_pct

Spectrometer



## S\_HDL\_FC\_pct

Spectrometer



## S\_HDL\_TG\_pct

Spectrometer

