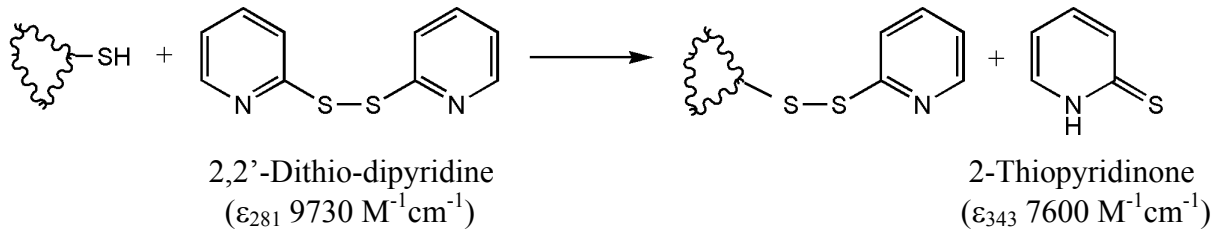


Quantification of SH groups with 2,2'-Dithio-dipyridine (2-PDS)



For each SH-group one molecule of 2-Thiopyridinone is formed.

The latter can be quantified via its absorption maximum at 343nm.

Required stock solutions:

- ca. 1mM 2-PDS in 0.2M NaOAc (pH 4.0)
- 1M NaOAc (pH 4.0)

- start the Cary WinUV program “Scan” and let the UV-lamp warm up
- select scan range 380-250nm
- prepare the following samples

	blind	sample
Solution containing SH groups	0 μL	x μL
1mM 2-PDS	12.5 μL	12.5 μL
1M NaOAc (pH 4.0)	22.5 μL	22.5 μL
ddH ₂ O	90 μL	90-x μL
	125 μL	125 μL

- wait 15 minutes
- blank UV spec. against ddH₂O
- measure spectra

$$[\text{protein}] = \{(A_{343,\text{sample}} - A_{343,\text{blind}}) \times 125\} / \{7600 * x * n_{\text{SH}}\} \text{ mol/L}$$

n_{SH} : number of SH groups in the protein / molecule

The final SH concentration in the sample **MUST** be 20-75 μM !!! Adjust x accordingly.