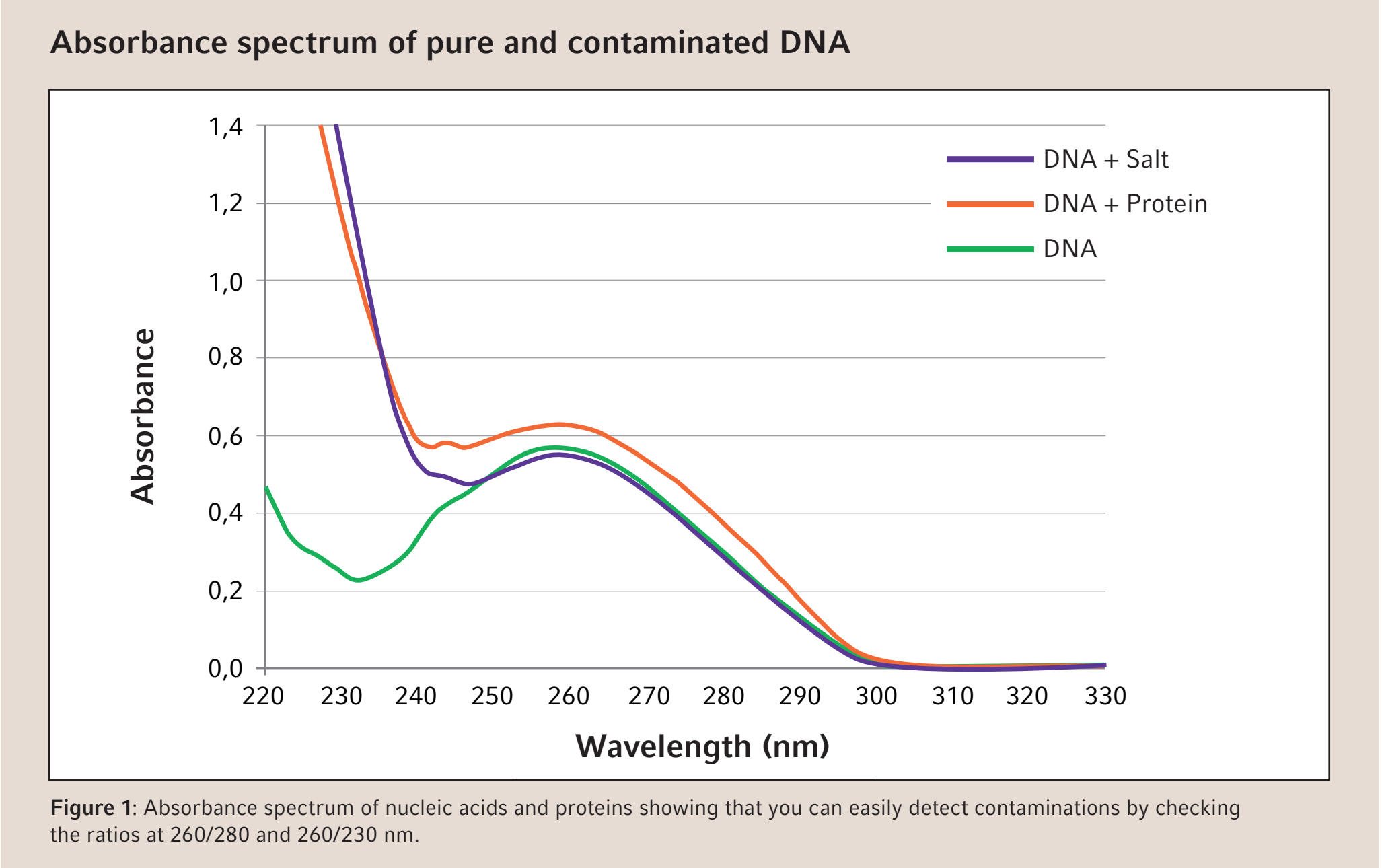
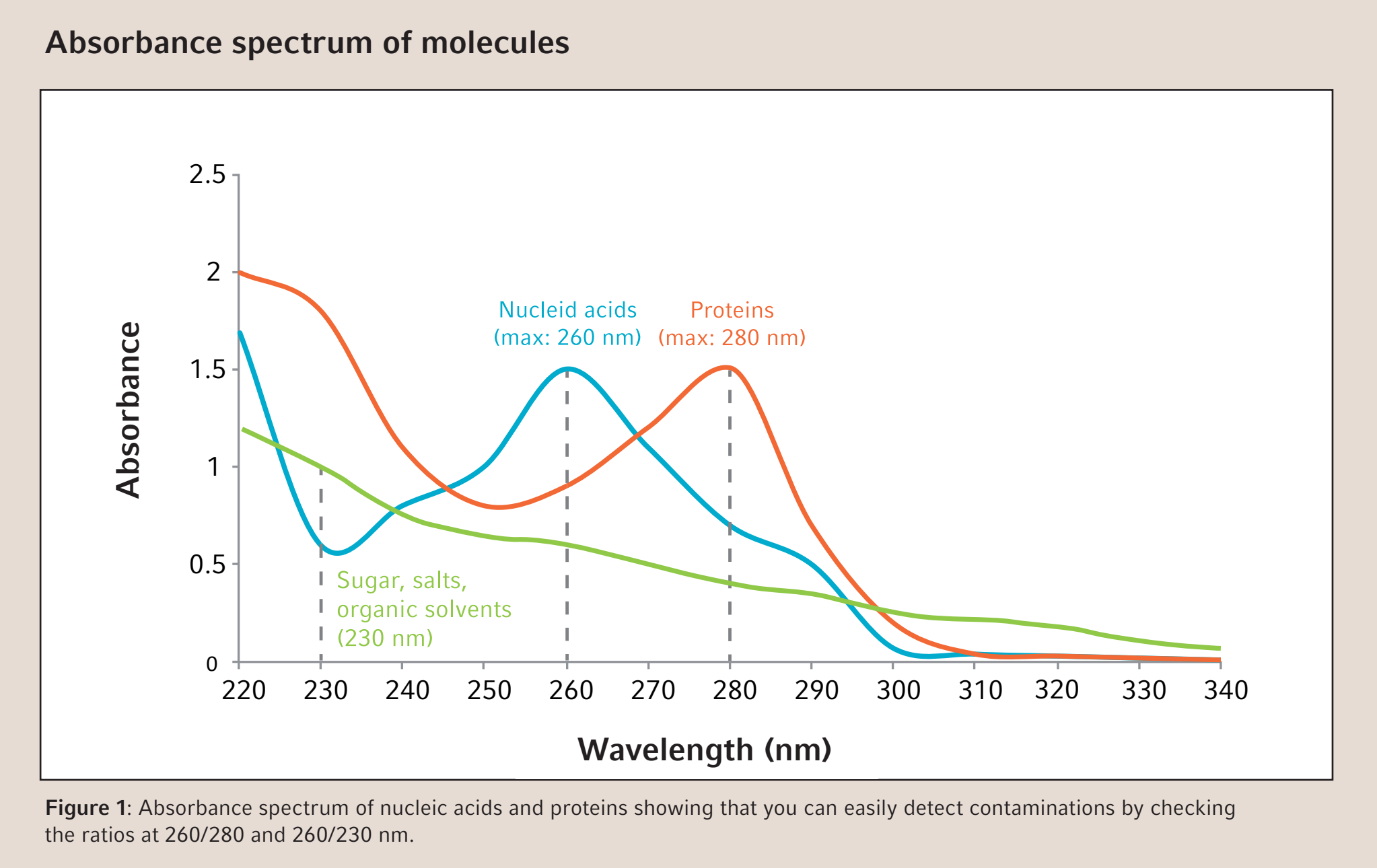
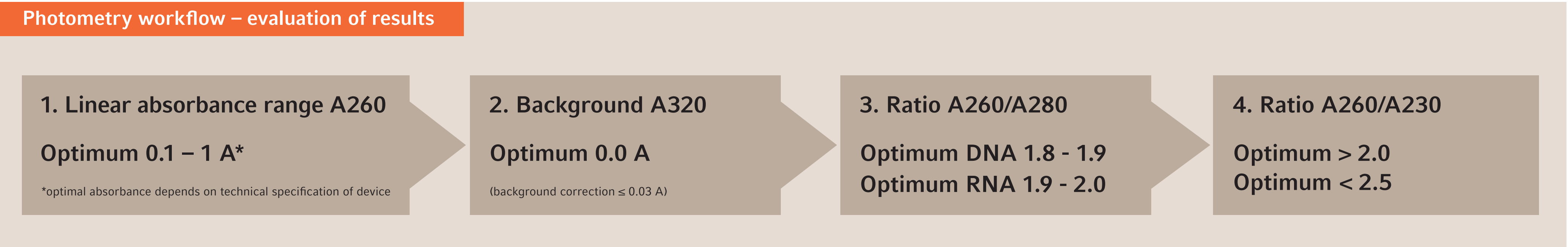


# Nucleic Acid Photometry

Check of critical parameters




Troubleshooting		
Problem	Reason	Solution
Absorbance at 260 nm < 0.05**	Sample concentration too low	⇒ Use a cuvette with longer path length (if possible) ⇒ Concentrate your sample, or if it is a diluted sample, decrease the dilution ⇒ For very low concentrated samples use fluorescence spectrometry
	> 2.0**	⇒ Use a cuvette with shorter path length, like the Eppendorf µCuvette® G1.0 ⇒ Dilute your sample
Measured absorbance in the UV range is above technical absorbance limit of the device	Inappropriate cuvette	⇒ Use UV-transparent cuvette ⇒ Ensure cuvette has correct light beam height ⇒ Ensure cuvette is entered in the correct direction
Background measurement A320 > 0.0	Turbidity / Air bubbles	⇒ Purify your sample ⇒ Remove air bubbles (pipette sample carefully into cuvette) ⇒ Ensure minimum required sample volume for the cuvette is used ⇒ Ensure there are no fingerprints on the optical surfaces of the cuvette
	Not enough liquid in the cuvette Dirty cuvette	⇒ Background correction if A is ≤ 0.03
Ratio A260/A280 < 1.8 (for DNA) < 1.9 (for RNA)	Contamination with proteins Contamination with phenol or other aromatic compounds	⇒ Purify your sample
Ratio A260/A280 > 1.9 (for DNA) > 2.0 (for RNA)	Inappropriate blank solution	⇒ Use the same neutral or alkaline buffer (e.g. TE-Buffer) for blank and sample
Ratio A260/A230 < 2.0	Contamination with proteins Contamination with aromatic compounds, organic solvents, carbohydrates, salts	⇒ Purify your sample
	Inappropriate blank solution	⇒ Use the same neutral or alkaline buffer (e.g. TE-Buffer) for blank and sample
Ratio A260/A230 > 2.5	Inappropriate blank solution	⇒ Use the same neutral or alkaline buffer (e.g. TE-Buffer) for blank and sample

\*\*Valid for the measuring range of the Eppendorf BioPhotometer® D30 and the Eppendorf BioSpectrometer®


Photometry products



Eppendorf BioSpectrometer® basic



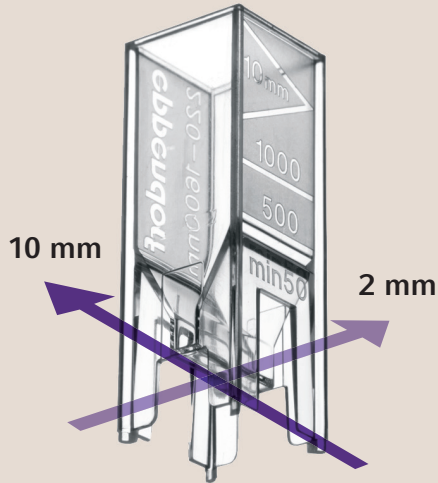
Eppendorf BioSpectrometer® fluorescence



Eppendorf BioPhotometer® D30



Eppendorf µCuvette® G1.0



Eppendorf UVette®