

# Formulas used for iteration two

October 12, 2022

## 1 it2-lysate formulas

$$\begin{aligned}\ln(A_{450nm}) &= -0.69563682646025 - 0.16154256497682pH + 0.21598197761479Gold + \\ & 0.012056225805149Temperature \\ \ln(A_{500nm}) &= -0.72205200872122 - 0.17252391512406pH + 0.22617017450971Gold + \\ & 0.012094236318603Temperature \\ \ln(A_{550nm}) &= -0.59794046901973 - 0.17208905104829pH + 0.24070943008774Gold + \\ & 0.010281568473086Temperature \\ \ln(A_{600nm}) &= -0.67222736115031 - 0.16213545134375pH + 0.24493173006013Gold + \\ & 0.010887680886362Temperature \\ \ln(A_{650nm}) &= -0.72394053565147 - 0.16423280876782pH + 0.24626302109755Gold + \\ & 0.011969938229895Temperature \\ \ln(A_{700nm}) &= -0.73820920290663 - 0.17267879987781pH + 0.24724185095024Gold + \\ & 0.012834073617609Temperature \\ \ln(A_{750nm}) &= -0.75570247148779 - 0.17787464133958pH + 0.24521003618302Gold + \\ & 0.013555141195559Temperature \\ \ln(A_{800nm}) &= -0.80551490147745 - 0.18249777589935pH + 0.24670490163979Gold + \\ & 0.014328563544826Temperature \\ \ln(A_{850nm}) &= -0.85601937583128 - 0.18451762292521pH + 0.24660453944436Gold + \\ & 0.014955429162575Temperature \\ \ln(A_{900nm}) &= -0.89156750913062 - 0.18397674829903pH + 0.24389296032765Gold + \\ & 0.015378945032049Temperature \\ \ln(A_{950nm}) &= -0.85213965886264 - 0.17840582877732pH + 0.22375602738279Gold + \\ & 0.01595193461445Temperature \\ \ln(A_{1000nm}) &= -0.8165408176008 - 0.1753982021692pH + 0.20917115617766Gold + \\ & 0.016560716056778Temperature\end{aligned}$$

## 2 it2-SN formulas

$$\begin{aligned}\ln(A_{450nm}) &= -1.0790256435869 - 0.028386523737902pH + 0.16532324140148Gold - \\ & 0.00099348798292749Temperature \\ \ln(A_{500nm}) &= -1.1460230091171 - 0.033447267676413pH + 0.17143205079802Gold - \\ & 0.00068284866302478Temperature \\ \ln(A_{550nm}) &= -0.89545468935251 - 0.060507383542483pH + 0.19540752612151Gold -\end{aligned}$$

$0.002390357442737Temperature$   
 $\ln(A_{600nm}) = -0.90751668414189 - 0.061662736314883pH + 0.20535939351071Gold - 0.0021092911065642Temperature$   
 $\ln(A_{650nm}) = -0.98751196529773 - 0.059006949168569pH + 0.20811899134623Gold - 0.001045882028624Temperature$   
 $\ln(A_{700nm}) = -1.0521935681594 - 0.05693160194058pH + 0.20702215800633Gold + 4.7257086947787 * Math.pow(10, -5)Temperature$   
 $\ln(A_{750nm}) = -1.1405669541663 - 0.047058482407915pH + 0.20113808346632Gold + 0.0011013912665168Temperature$   
 $\ln(A_{800nm}) = -1.2662964009555 - 0.035796527700946pH + 0.20040772635786Gold + 0.0018532944067012Temperature$   
 $\ln(A_{850nm}) = -1.4237591658154 - 0.019188027203349pH + 0.19852613233326Gold + 0.0026189530227588Temperature$   
 $\ln(A_{900nm}) = -1.5414982528003 - 0.0022604693616295pH + 0.19517531770514Gold + 0.0028884039166902Temperature$   
 $\ln(A_{950nm}) = -1.6266148019293 + 0.019356746060232pH + 0.17999224627971Gold + 0.0037673392453254Temperature$   
 $\ln(A_{1000nm}) = -1.7032841860638 + 0.03790018950072pH + 0.16813743603836Gold + 0.0045981831757637Temperature$

### 3 it2-ddH2O formulas

$\ln(A_{450nm}) = -2.7822383884896 - 0.1103802988895pH + 0.14955103123673Gold - 0.0064940093543986Temperature$   
 $\ln(A_{500nm}) = -2.7631757603585 - 0.10476993869626pH + 0.13882515307191Gold - 0.0094249254855193Temperature$   
 $\ln(A_{550nm}) = -2.7186422505156 - 0.10239888954852pH + 0.12527472757531Gold - 0.010626841198643Temperature$   
 $\ln(A_{600nm}) = -2.6950575255922 - 0.10201381038639pH + 0.11723752625034Gold - 0.011446551458479Temperature$   
 $\ln(A_{650nm}) = -2.6817416607036 - 0.10362023363192pH + 0.11411963541293Gold - 0.012138676574809Temperature$   
 $\ln(A_{700nm}) = -2.6794680797556 - 0.10496312240988pH + 0.11151469194628Gold - 0.012374434683479Temperature$   
 $\ln(A_{750nm}) = -2.6623169449768 - 0.099605901217765pH + 0.10240212506287Gold - 0.012253658461423Temperature$   
 $\ln(A_{800nm}) = -2.6907001792441 - 0.095074210096553pH + 0.097611785801731Gold - 0.012076941188052Temperature$   
 $\ln(A_{850nm}) = -2.7240871922936 - 0.091083437835872pH + 0.09168444823379Gold - 0.011252442720742Temperature$   
 $\ln(A_{900nm}) = -2.6922490344272 - 0.084951778402048pH + 0.086903354745121Gold - 0.011953170656297Temperature$   
 $\ln(A_{950nm}) = -2.6048545709776 - 0.072529191931844pH + 0.074254472009335Gold - 0.011062761306818Temperature$

$$\ln(A_{1000nm}) = -2.4878817272754 - 0.065101010699688pH + 0.067593269063175Gold - 0.011848394123799Temperature$$