```
#pragma rtGlobals=1
#pragma ModuleName= Iolite_ActiveDRS
StrConstant DRS_Version_No= "1.0"

	GlobalString		IndexChannel		="Pb208"
	GlobalString		ReferenceStandard		="G_NIST612"
	GlobalString		DefaultIntensityUnits		="CPS"
	GlobalVariable		MaskThreshold		=1000
	GlobalVariable		MaskEdgeDiscardSeconds		=1
	GlobalVariable		Hg204_202		=0.2299

Function InitialiseActiveDRS()
	SVAR nameofthisDRS=$ioliteDFpath("Output","S_currentDRS")
	Print "DRS initialised:  \"" + nameofthisDRS + "\", Version " + DRS_Version_No + "\r"
End

Function RunActiveDRS()

	ProgressDialog()

	string currentdatafolder = GetDataFolder(1)
	setdatafolder $ioliteDFpath("DRSGlobals","")

	SVar IndexChannel, ReferenceStandard, DefaultIntensityUnits
	NVar MaskThreshold, MaskEdgeDiscardSeconds
	NVar Hg204_202

	setdatafolder $currentdatafolder

	DRSabortIfNotWave(ioliteDFpath("Splines", IndexChannel+"_Baseline_1"))

	SVAR ListOfOutputChannels=$ioliteDFpath("Output","ListOfOutputChannels")
	SVAR ListOfIntermediateChannels=$ioliteDFpath("Output","ListOfIntermediateChannels")
	SVAR ListOfInputChannels=$ioliteDFpath("input","GlobalListOfInputChannels")

	Wave Index_Time = $MakeIndexTimeWave()
	Variable NoOfPoints=numpnts(Index_Time)
	Wave IndexOut = $InterpOntoIndexTimeAndBLSub(IndexChannel)

	SetProgress(25,"25%")

	Wave Pb208_CPS = $InterpOntoIndexTimeAndBLSub("Pb208",name="Pb208_CPS")
	Wave Pb207_CPS = $InterpOntoIndexTimeAndBLSub("Pb207",name="Pb207_CPS")
	Wave Pb206_CPS = $InterpOntoIndexTimeAndBLSub("Pb206",name="Pb206_CPS")
	Wave Tl205_CPS = $InterpOntoIndexTimeAndBLSub("Tl205",name="Tl205_CPS")
	Wave Tl203_CPS = $InterpOntoIndexTimeAndBLSub("Tl203",name="Tl203_CPS")

	Wave Hg202_CPS = $InterpInputOntoIndexTime("Hg202",name="Hg202_CPS")
	Wave Pb_Hg204_CPS = $InterpInputOntoIndexTime("Pb204",name="Pb_Hg204_CPS")

	Wave Hg204_CPS = $MakeioliteWave("CurrentDRS", "Hg204_CPS", n = NoOfPoints)
	Hg204_CPS = Hg202_CPS * Hg204_202

	Wave Pb204_Hg_Corr = $MakeioliteWave("input", "Pb204_Hg_Corr", n = NoOfPoints)
	Pb204_Hg_Corr = Pb_Hg204_CPS - Hg204_CPS

	Wave Pb204_Hg_Corr_Time = $MakeioliteWave("input", "Pb204_Hg_Corr_Time", n = NoOfPoints, Type = "d")
	Pb204_Hg_Corr_Time = Index_Time

	IF(WhichListItem("Pb204_Hg_Corr", ListOfInputChannels) < 0)
		ListOfInputChannels += "Pb204_Hg_Corr;"
	ENDIF
```

```
	Wave Pb204_CPS = $InterpOntoIndexTimeAndBLSub("Pb204_Hg_Corr",name="Pb204_CPS")

	ListOfIntermediateChannels+="Pb208_CPS;Pb207_CPS;Pb206_CPS;Tl205_CPS;Tl203_CPS;"

	SetProgress(50,"50%")

	Wave Tl205_203 = $MakeioliteWave("CurrentDRS","Tl205_203",n=NoOfPoints)
	Wave Pb206_204 = $MakeioliteWave("CurrentDRS","Pb206_204",n=NoOfPoints)
	Wave Pb207_204 = $MakeioliteWave("CurrentDRS","Pb207_204",n=NoOfPoints)
	Wave Pb208_204 = $MakeioliteWave("CurrentDRS","Pb208_204",n=NoOfPoints)
	Wave Pb208_206 = $MakeioliteWave("CurrentDRS","Pb208_206",n=NoOfPoints)
	Wave Pb207_206 = $MakeioliteWave("CurrentDRS","Pb207_206",n=NoOfPoints)
	Wave TotalPbBeam = $MakeioliteWave("CurrentDRS","TotalPbBeam",n=NoOfPoints)
	Wave Hg202_Pb208 = $MakeioliteWave("CurrentDRS","Hg202_Pb208",n=NoOfPoints)
	Wave Tl205_Pb208 = $MakeioliteWave("CurrentDRS","Tl205_Pb208",n=NoOfPoints)
	Wave TotalTlBeam = $MakeioliteWave("CurrentDRS","TotalTlBeam",n=NoOfPoints)
	Wave Pb_Tl = $MakeioliteWave("CurrentDRS","Pb_Tl",n=NoOfPoints)

	ListOfIntermediateChannels+="Hg202_Pb208;Tl205_Pb208;Tl205_203;Pb206_204;Pb207_204;Pb208_204;Pb20
8_206;Pb207_206;TotalPbBeam;TotalTlBeam;Pb_Tl;"

	Wave
Mask=$DRS_CreateMaskWave(IndexOut,MaskThreshold,MaskEdgeDiscardSeconds,"Pb208","StaticAbsolute")

	SetProgress(75,"75%")

	Tl205_203 = Tl205_CPS/Tl203_CPS*Mask
	Pb206_204 = Pb206_CPS/Pb204_CPS*Mask
	Pb207_204 = Pb207_CPS/Pb204_CPS*Mask
	Pb208_204 = Pb208_CPS/Pb204_CPS*Mask
	Pb208_206 = Pb208_CPS/Pb206_CPS*Mask
	Pb207_206 = Pb207_CPS/Pb206_CPS*Mask
	TotalPbBeam = Pb204_CPS+Pb206_CPS+Pb207_CPS+Pb208_CPS
	Hg202_Pb208 = Hg202_CPS/Pb208_CPS*Mask
	Tl205_Pb208 = Tl205_CPS/Pb208_CPS*Mask
	TotalTlBeam = Tl205_CPS+Tl203_CPS
	Pb_Tl = TotalPbBeam/TotalTlBeam

	RecalculateIntegrations("*","*")

	ListOfOutputChannels+="Pb208_CPS;Hg202_Pb208;Tl205_Pb208;Pb_Tl;Tl205_203;Pb206_204;Pb207_204;Pb
208_204;Pb208_206;Pb207_206;"

	SetProgress(100,"DRS finished")

End
```