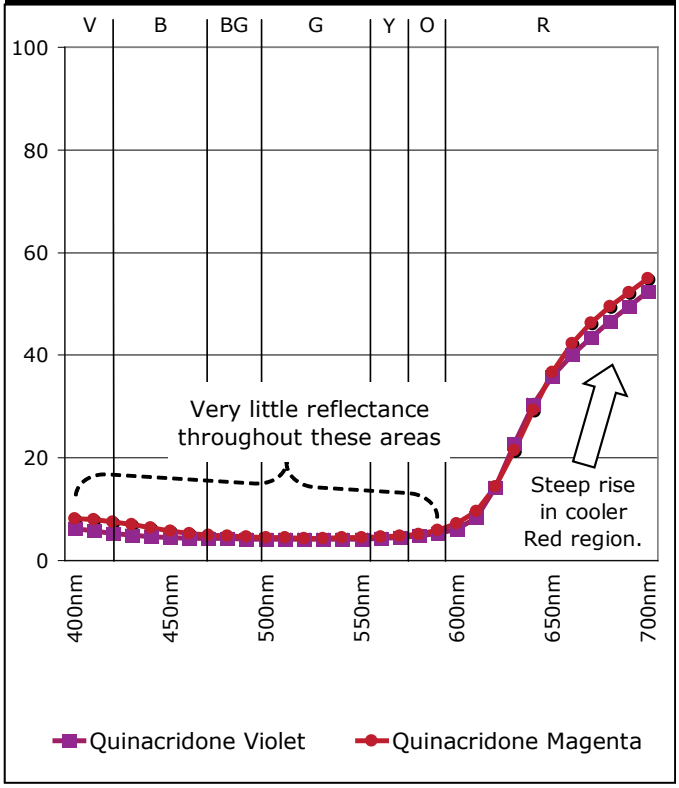
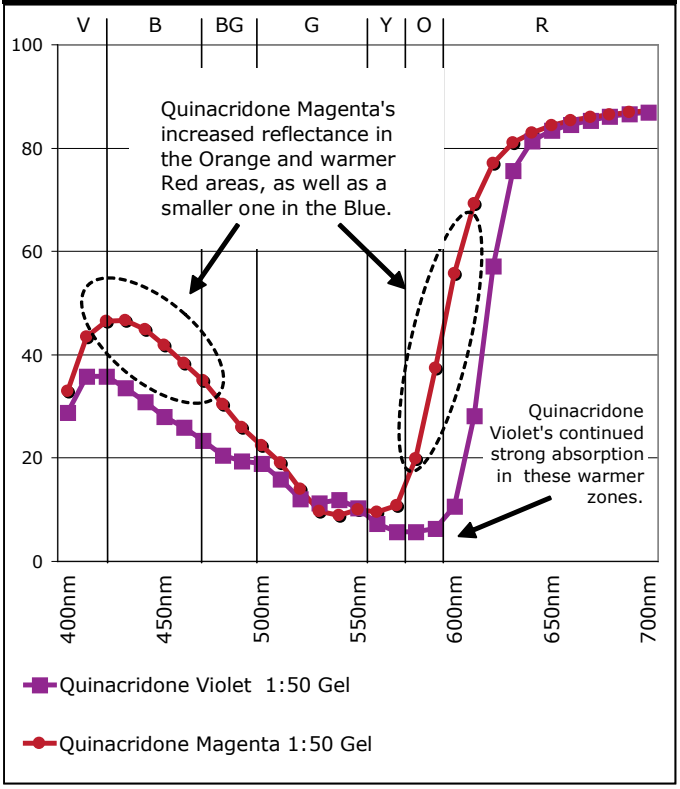
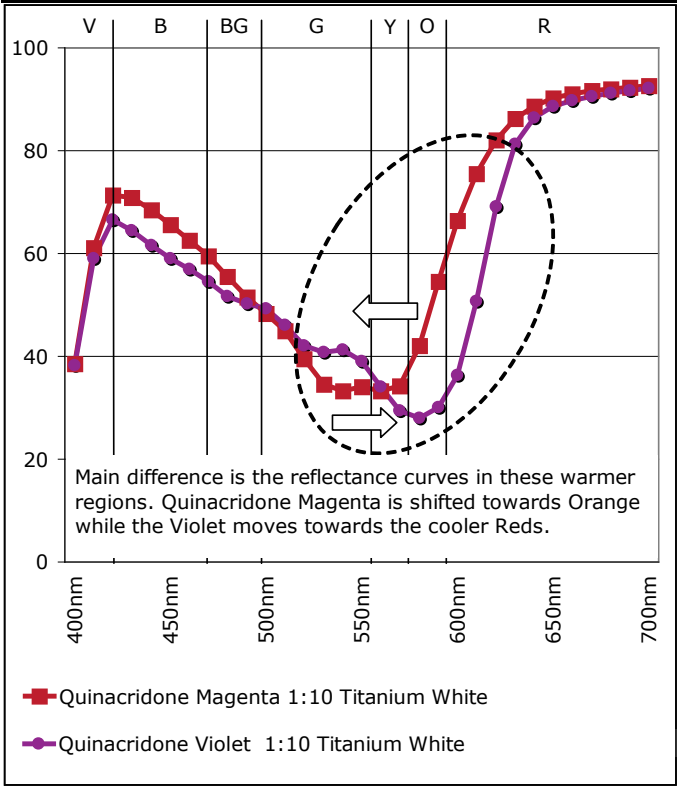
GRAPH 4: Quinacridone Violet and Quinacridone Magenta Masstones



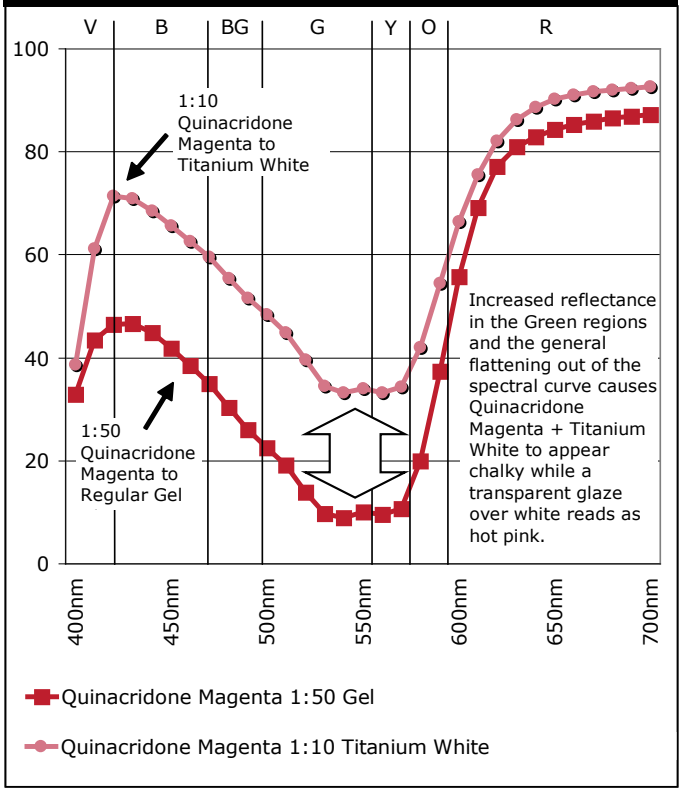
GRAPH 5: Quinacridone Violet and Quinacridone Magenta Mixed 1:50 with Regular Gel (Gloss)



GRAPH 6: Quinacridone Magenta and Quinacridone Violet Mixed 1:10 with Titanium White



GRAPH 7: Quinacridone Magenta Mixed 1:50 with Regular Gel (Gloss) and 1:10 with Titanium White



Burnt Sienna (PBr7) / Transparent Red Iron Oxide (PR 101)

In this grouping, well-known Burnt Sienna is contrasted with the similarly hued Transparent Red Iron Oxide. Both start off as mid-toned earths, the Burnt Sienna a touch brighter and with a slightly higher reflectance in the warmer orange to yellow range, while the Transparent Red Iron Oxide reads as a ruddy and rich mahogany brown, with its peak reflectance deep within the cooler range of reds. None of that, however, quite prepares one for the transformations that happen when the samples are tinted with white or mixed with gel to form a glaze. As the graph shows (Graph 3), for example, Transparent Red Iron Oxide jumps dramatically in Chroma, or Saturation, even when mixed as high as 1:1 with Titanium White. By contrast, Burnt Sienna remains very low in Chroma, never raising much beyond its starting point, as it forms the tell-tale cold and pasty pastels of nearly every brown when mixed with white alone. Similarly, when making glazes, the Transparent Red Iron Oxide blooms into rich browns with bright, fiery undertones of orange while the Burnt Sienna will always carry a slight sense of murkiness.

Link to additional supporting visuals (click)

FAMILY RESEMBLANCES

Quinacridone Violet and Quinacridone Magenta Masstones

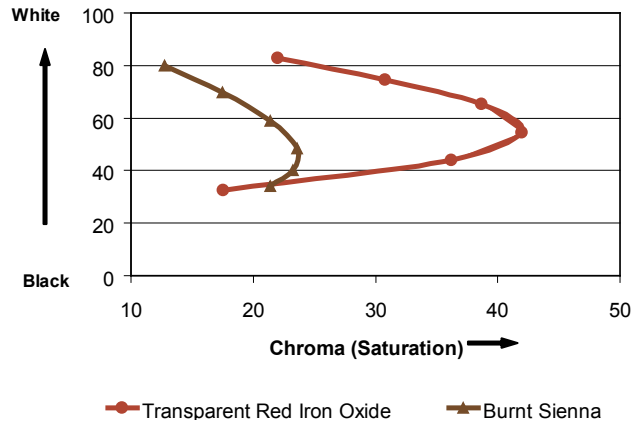
Quinacridone Magenta and Violet are one of those common cases of colors that seem so close together surely it couldn't matter all that much which an artist reaches for. Of course the answer depends somewhat on your needs. Quinacridone Violet is more opaque and bluer in the undertone than its more transparent, redder cousin. While these features go easily unnoticed when used full strength, the subtleties become much more pronounced when tinted or used in transparent glazes, as can be seen in the spectral graphs on page 4 (opposite).

Link to additional supporting visuals (click)

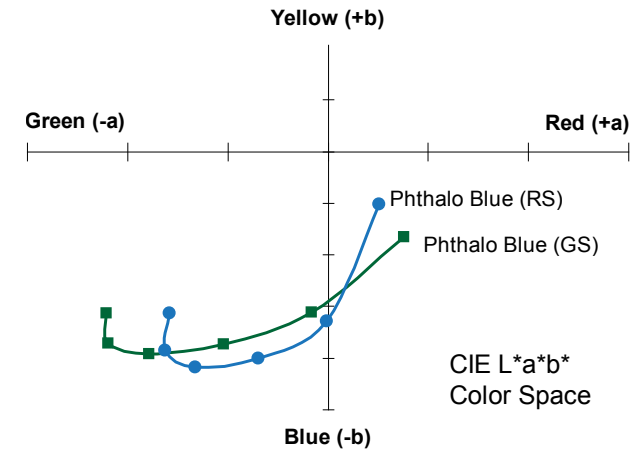
Notice how the spectral curves of the masstones of Quinacridone Violet and Magenta (Graph 4) have virtually identical shapes, with almost negligible levels of reflectance from Violet all the way through Yellow (400-600nm) until finally rising sharply within the cooler, outlying regions of Red. If one looked at these two colors, it would be difficult to tell them apart (see Web site). However, mixing these colors 1:10 with Titanium White or 1:50 with Regular Gel not only dramatically changes the shapes of their respective spectra but clearly highlights their differences as well. In both the transparent let downs (Graph 5) and the tints (Graph 6) of these colors one can 'see' the warmer aspect inherent in the Quinacridone Magenta, where its spectra now rises much earlier, indicating a new more orange component, while the Quinacridone Violet continues to exhibit strong absorption even past 600nm.

Another aspect to notice is the difference between the mixtures of Quinacridone Magenta with gel versus Titanium White (Graph 7). While the one with gel reaches a level of reflectance for cooler reds that is nearly equal to the same mixtures with white, there is a continued, extremely shallow level of absorbance in the 525-575nm range, which would be descriptive of a complementary shade of Green. Because this complement is suppressed, this transparent mixture is able to possess a very high and brilliant chroma, creating a scintillating pink that is impossible to achieve when adding white. It's a good lesson to remember for those constantly

GRAPH 3: Transparent Red Iron Oxide and Burnt Sienna Mixed 10:1, 3:1, 1:1, 1:3, 1:10 with Titanium White



GRAPH 8: Phthalo Blue (GS) and Phthalo Blue (RS) Mixed 10:1, 3:1, 1:1, 1:3, and 1:10 with Titanium White



frustrated with an inability to hit that jarringly high note. And the reason is easy to see. With the addition of white the spectral profile starts to flatten out, with more and more light in the Green range being reflected, which ultimately results in a loss of chroma and a 'chalkiness' as the cooler tones begin to essentially cancel or grey-out their warmer compliments.

Phthalo Blue (GS) (PB 15:3) / Phthalo Blue (RS) (PB 15:1)

These twins present an interesting conundrum where they start off ever-so-slightly reversed in terms of which masstone has a more measured red or green cast, with Phthalo Blue (GS) initially having a small edge in the red zone and an even a greater lean towards the warmer, violet end of the Blue range. As the colors are let down or tinted those positions reverse themselves and the warmer undertone of Phthalo Blue (RS) finally comes to the fore. One can see this in the above graph (Graph 8), where the Phthalo Blue (GS) starts, oddly enough, with actually more red then its supposedly warmer sibling Phthalo Blue (RS). However, once mixed with white, the Green Shade finally assumes its rightful place, passing across the trajectory traced by the Phthalo Blue (RS) and comfortably out-distancing it along the green axis. This peculiar flip-flop holds true even when extending these with gel and can be clearly felt when mixing with yellow to create various greens.

(continued on page 9)

Link to additional supporting visuals (click)

