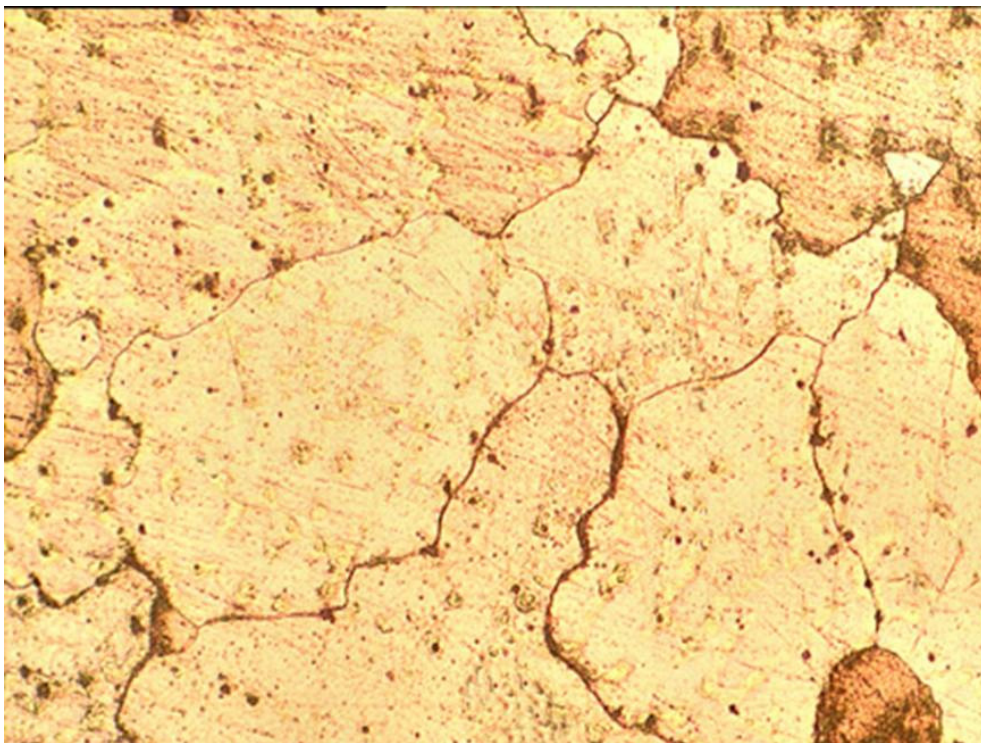


Appendix 4: Colour photomicrographs of bronzes cast in bronze moulds

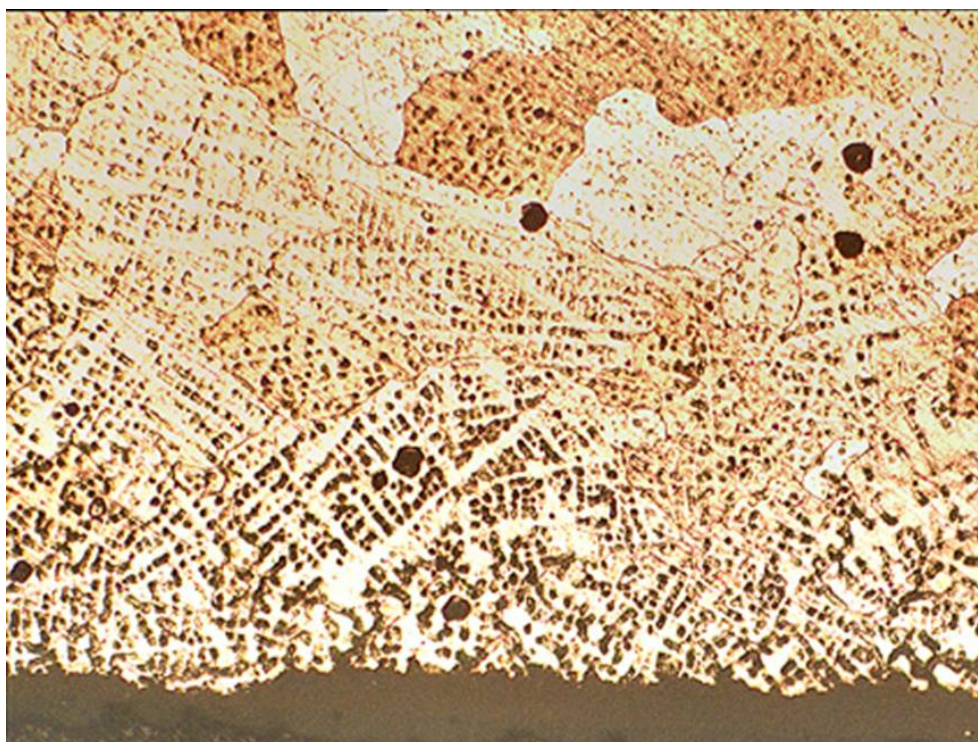


a: Image width 1.3mm

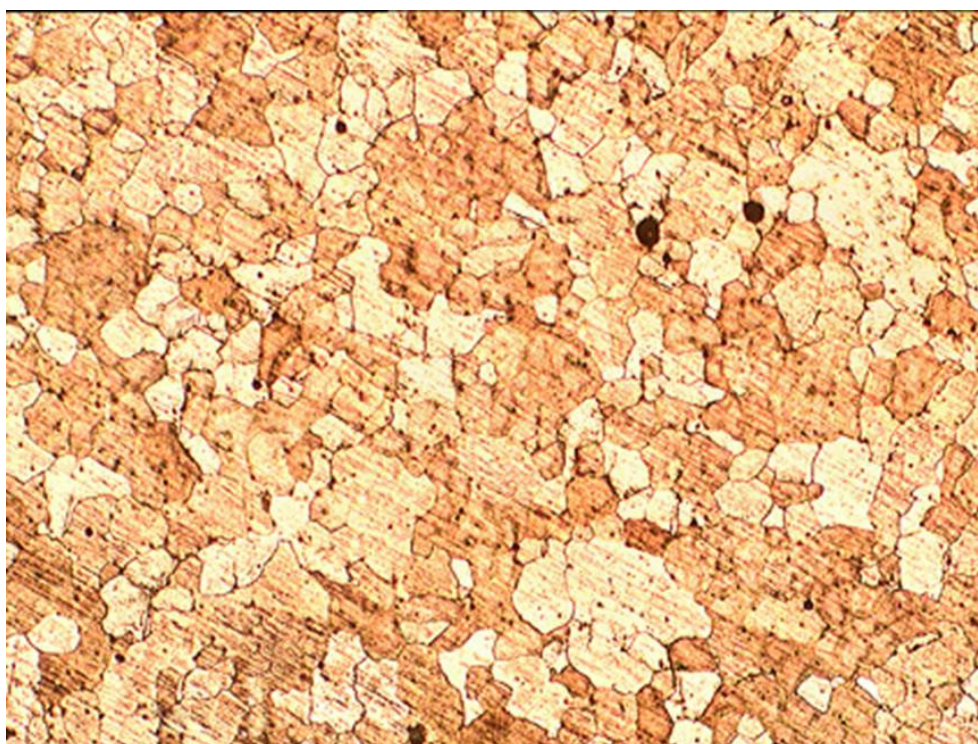


b: Image width 0.33mm

Figure B1. 2% Sn bronze, preheated/air-cooled, showing a dendritic structure without $\alpha+\delta$ eutectoids



a: at the surface; image width 1.3mm



b: in the centre; image width 1.3mm

Figure B2. 2% Sn bronze, flame-warmed/air-cooled, showing a dendritic structure at the surface and a granular structure in the centre.



Figure B3. 6% Sn bronze, preheated/air-cooled, showing a dendritic structure with very few $\alpha+\delta$ eutectoids on the grain boundaries. Image width 1.3mm

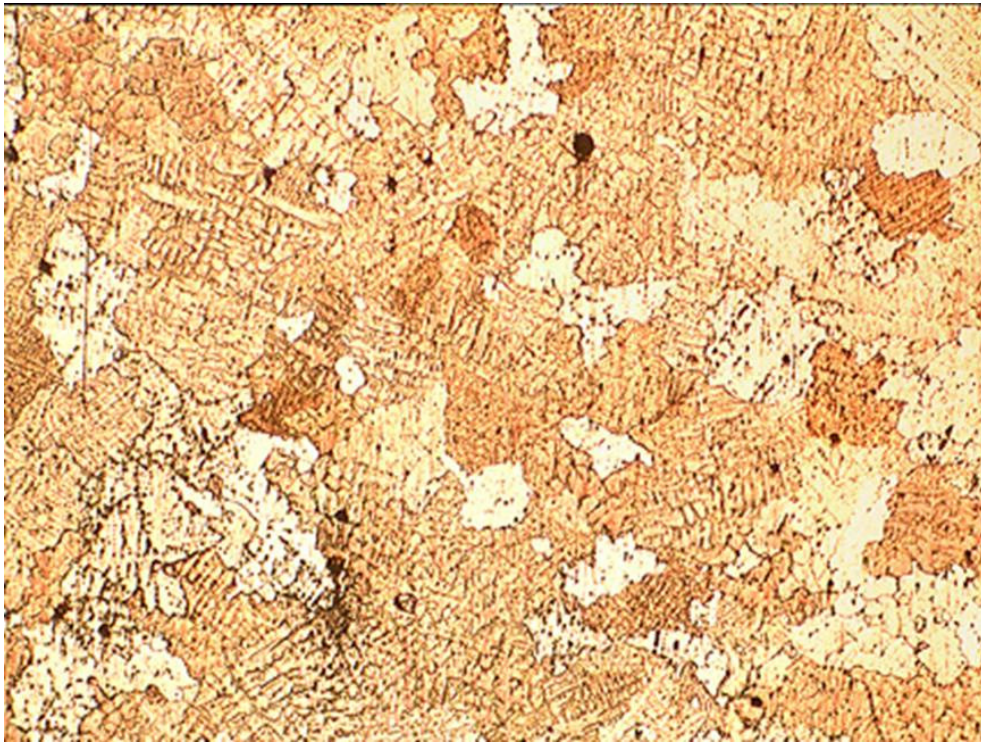
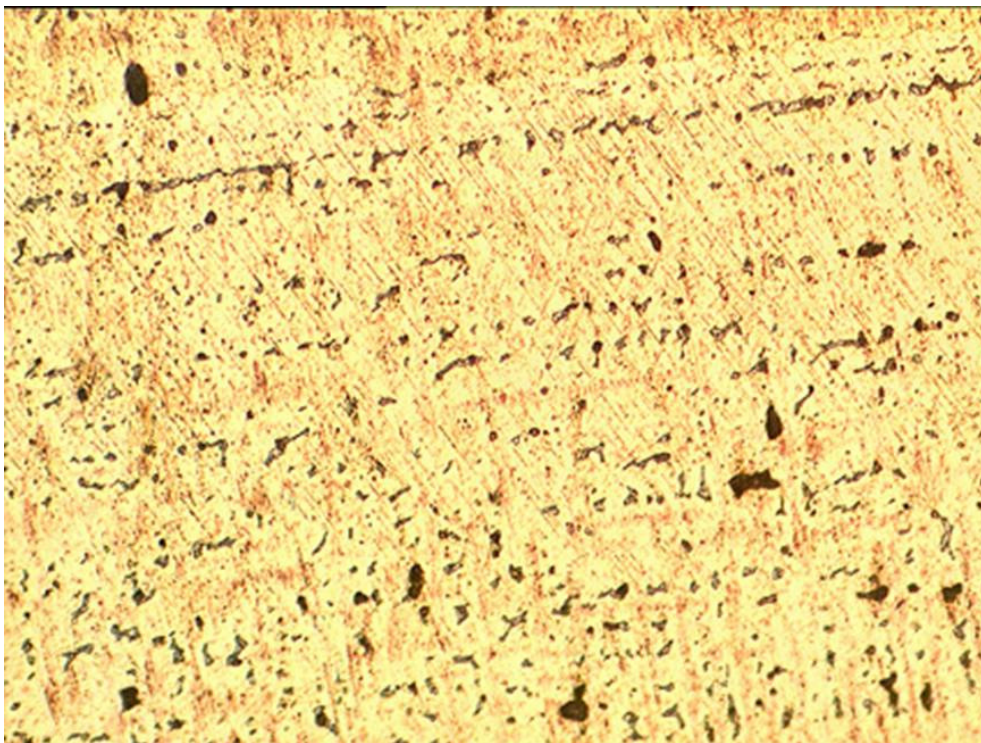


Figure B4. 6% Sn bronze, flame-warmed/air-cooled, showing a very similar structure to the preheated/air-cooled bronze (B3). Image width 1.3mm



a: Image width 1.3mm



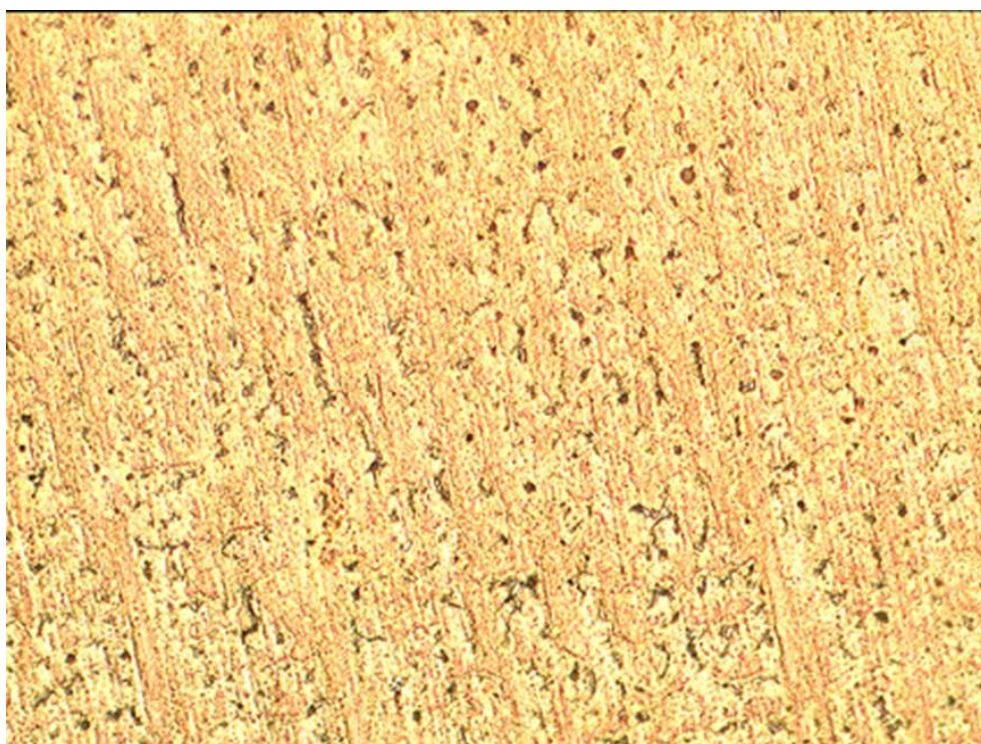
b: image width 0.33mm

Figure B5. 10% Sn bronze, preheated/air-cooled, showing a dendritic structure with $\alpha+\delta$ eutectoids.

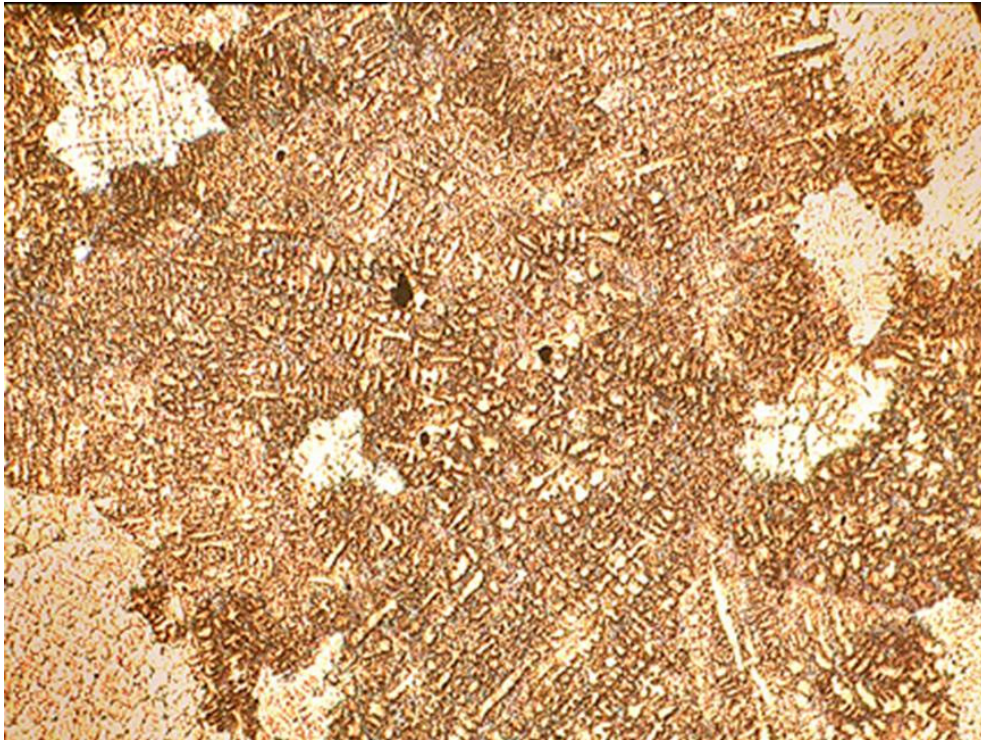
Appendix 4: Colour photomicrographs of bronzes cast in bronze moulds



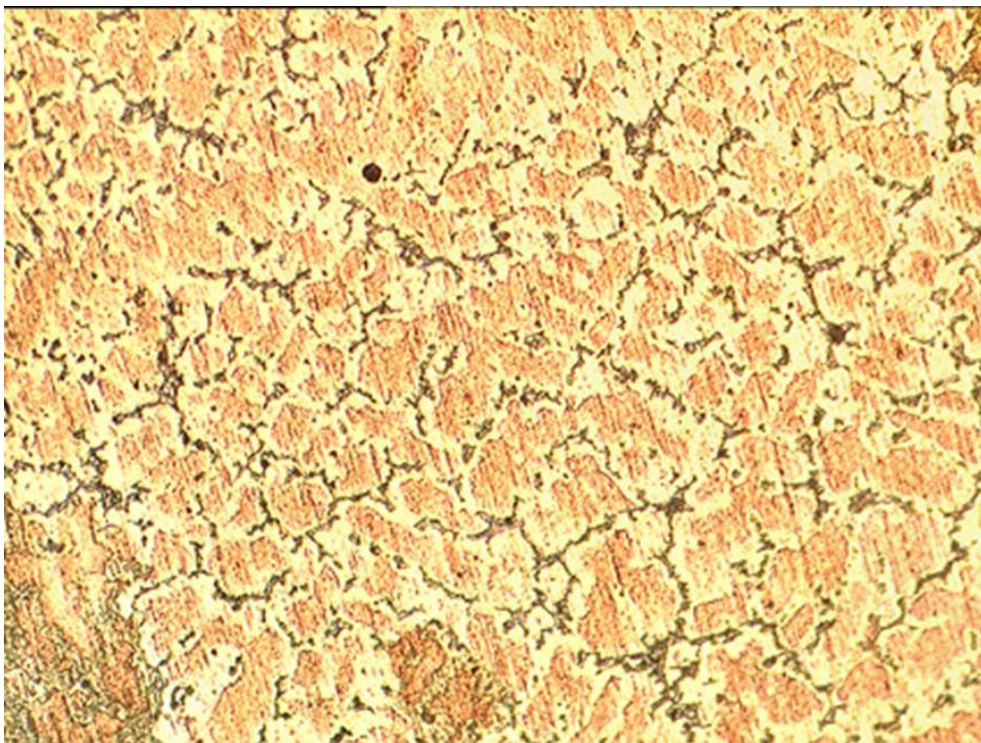
a: Image width 1.3mm



b: Image width 0.33mm



c: Image width 1.3mm



d: Image width 0.33mm

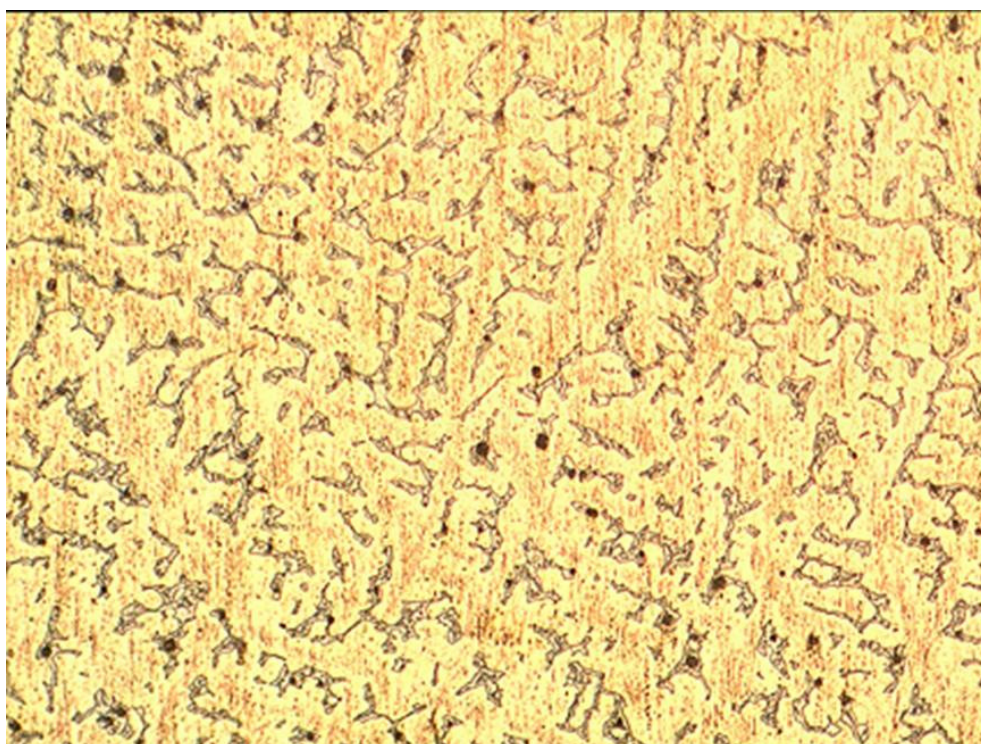
Figure B6. 10% Sn bronze, flame-warmed/air-cooled.

a and b showing similar structure to B5

c and d showing another part of the same sample with shorter dendrites and more $\alpha+\delta$ eutectoids.

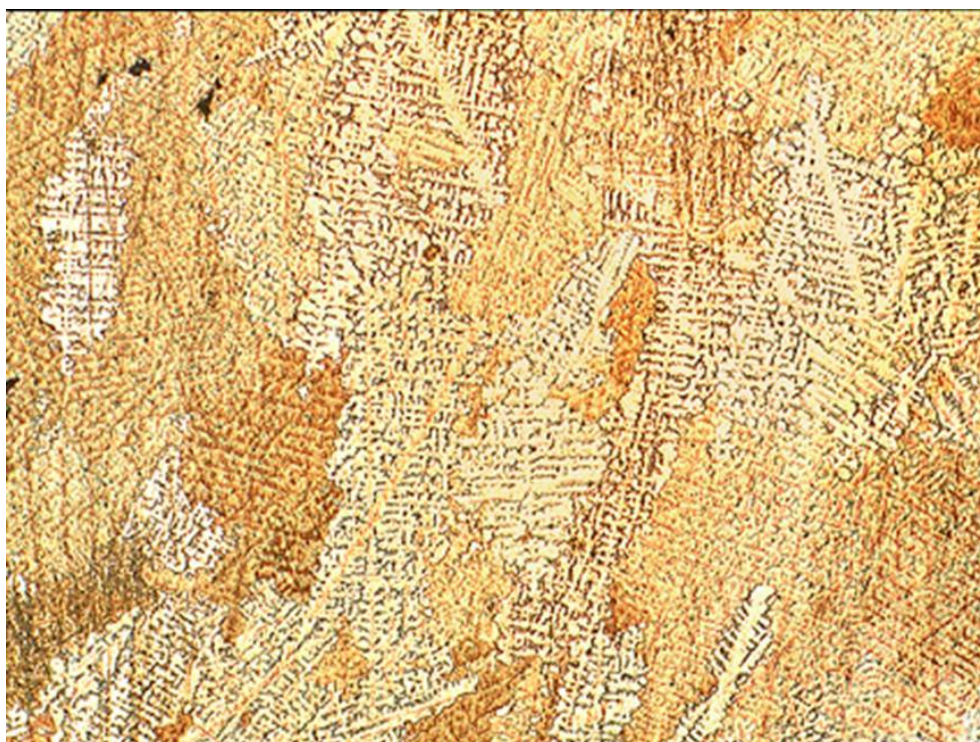


a: Image width 1.3mm



b: Image width 0.33mm

Figure B7. 15% Sn bronze, preheated/air-cooled, showing a pronounced dendritic structure without many $\alpha+\delta$ eutectoids

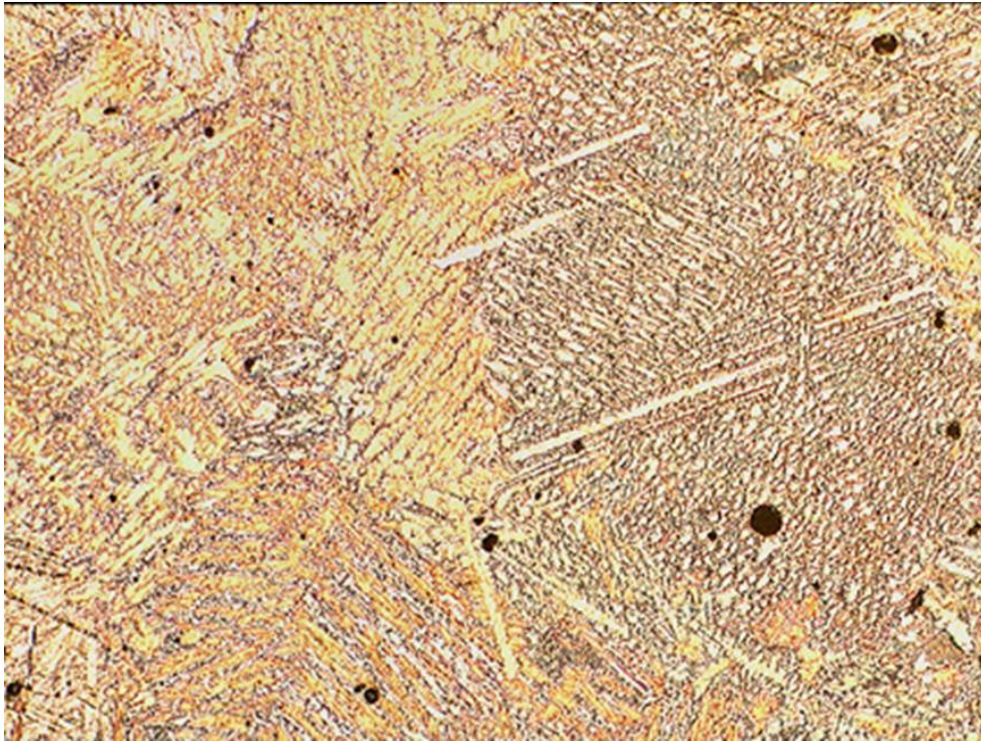


a: Image width 1.3mm

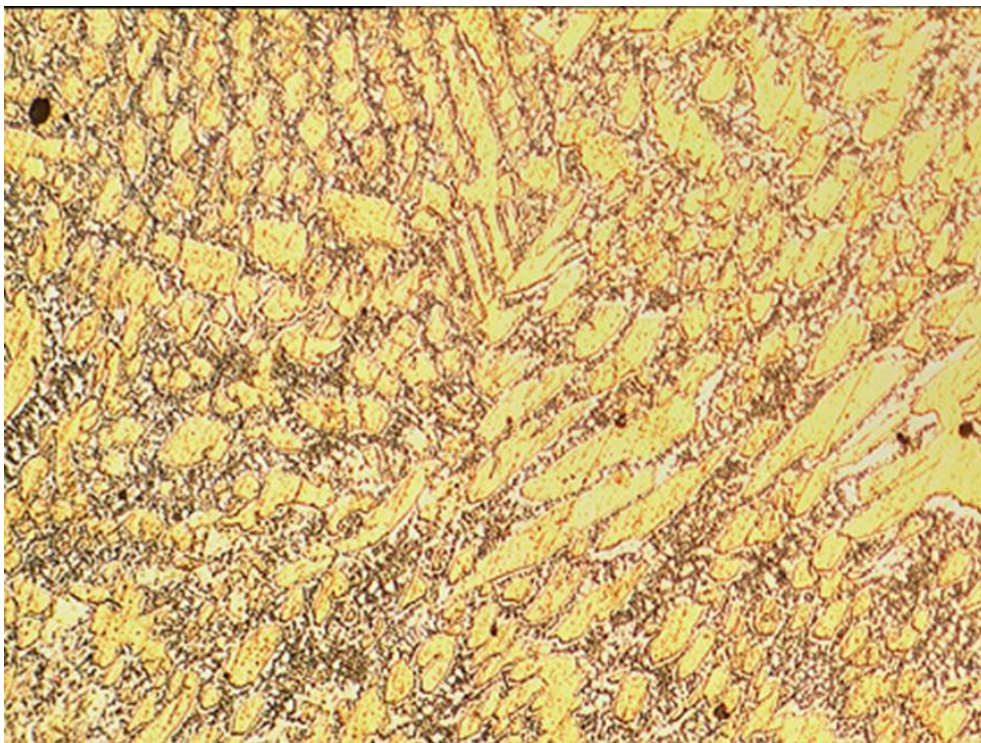


b: Image width 0.33mm

Figure B8. 15% Sn bronze, flame-warmed/air-cooled, showing a similar structure to the preheated/air-cooled bronze (B7).



a: Image width 1.3mm

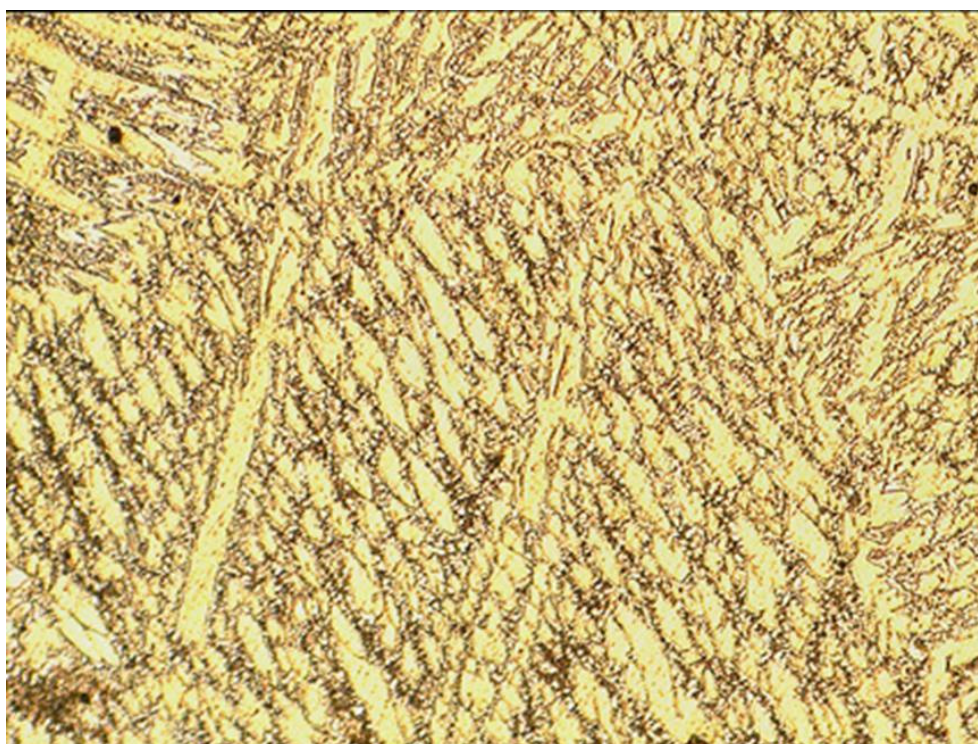


b: Image width 0.33mm

Figure B9. 23% Sn bronze, preheated/air-cooled, showing a dendritic structure with massive $\alpha+\delta$ eutectoids.

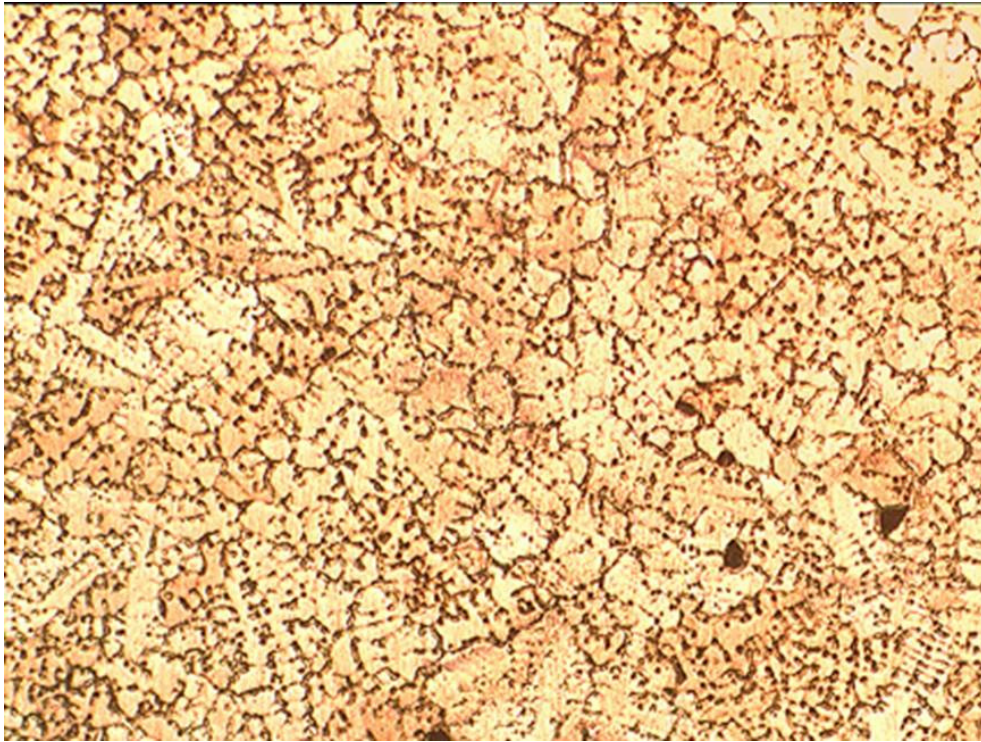


a: Image width 1.3mm

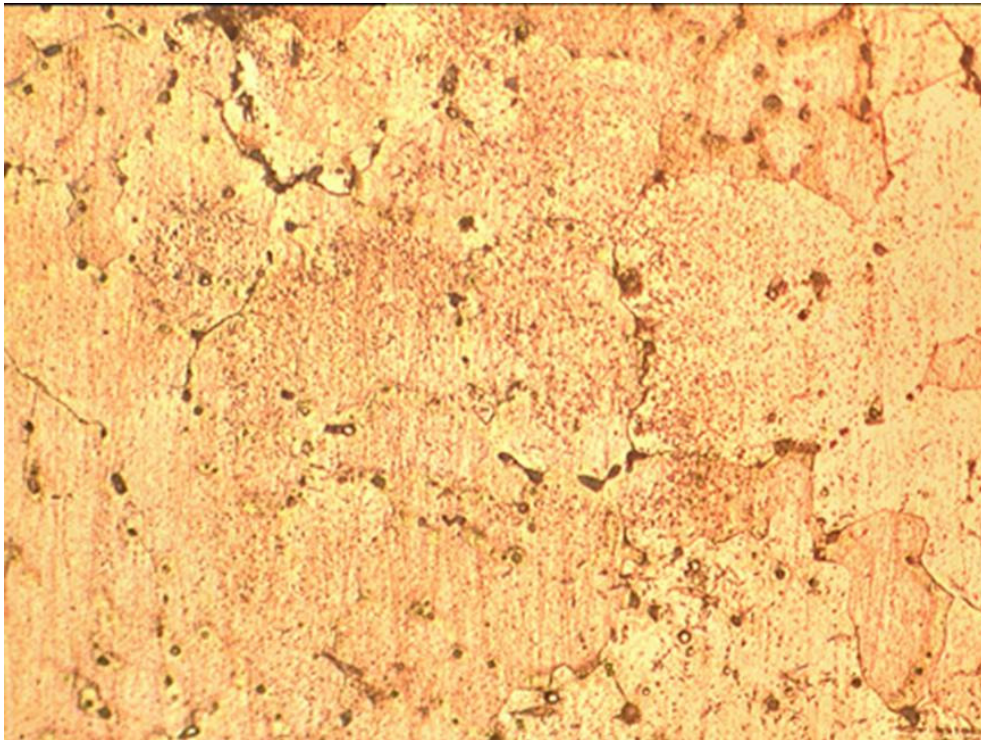


b: Image width 0.33mm

Figure B10. 23% Sn bronze, flame-warmed/air-cooled, showing a similar structure to the preheated/air-cooled bronze (B9).

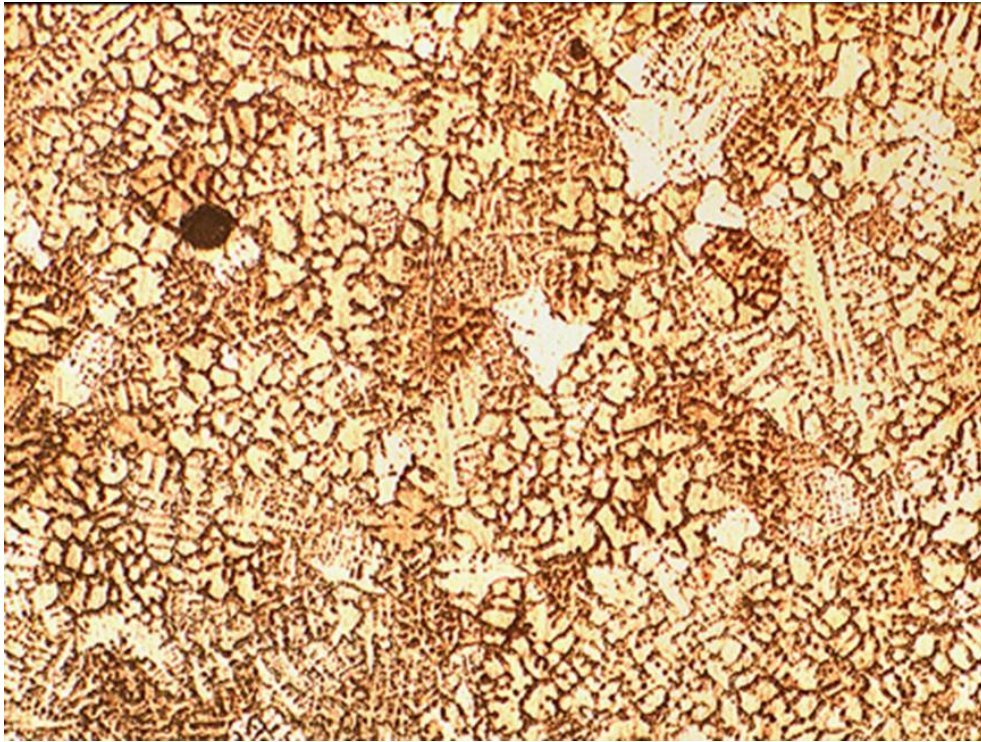


a: Image width 1.3mm

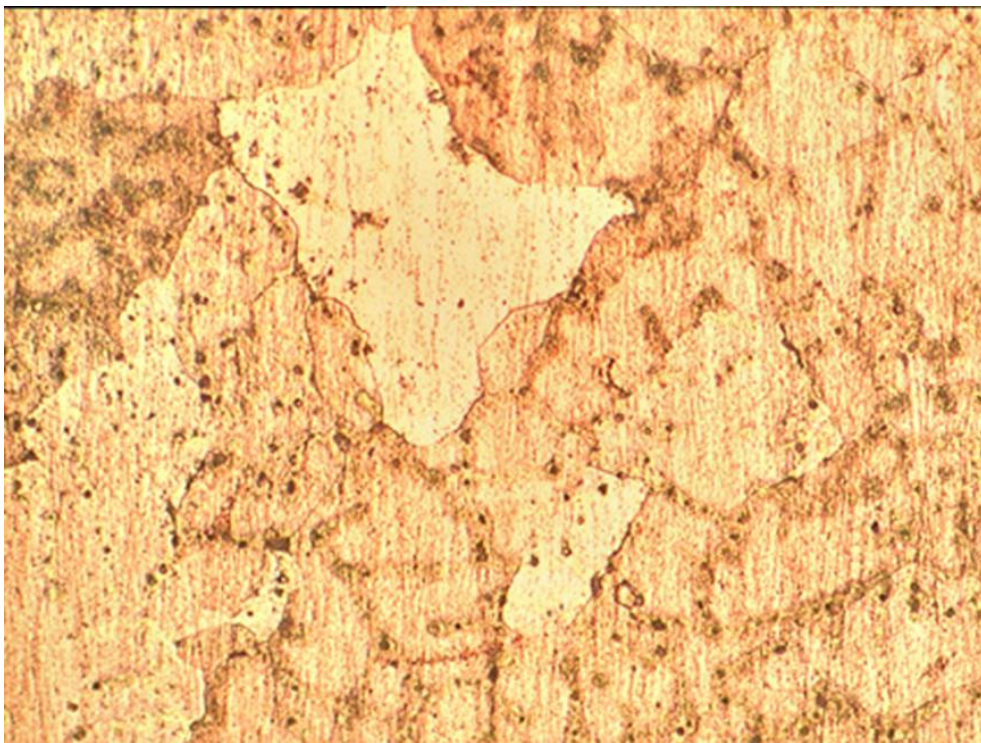


b: Image width 0.33mm

Figure B11. 2% Sn+2% Pb bronze, preheated/air-cooled, showing a dendritic structure without $\alpha+\delta$ eutectoids. Pb droplets are mainly on grain boundaries.



a: Image width 1.3mm

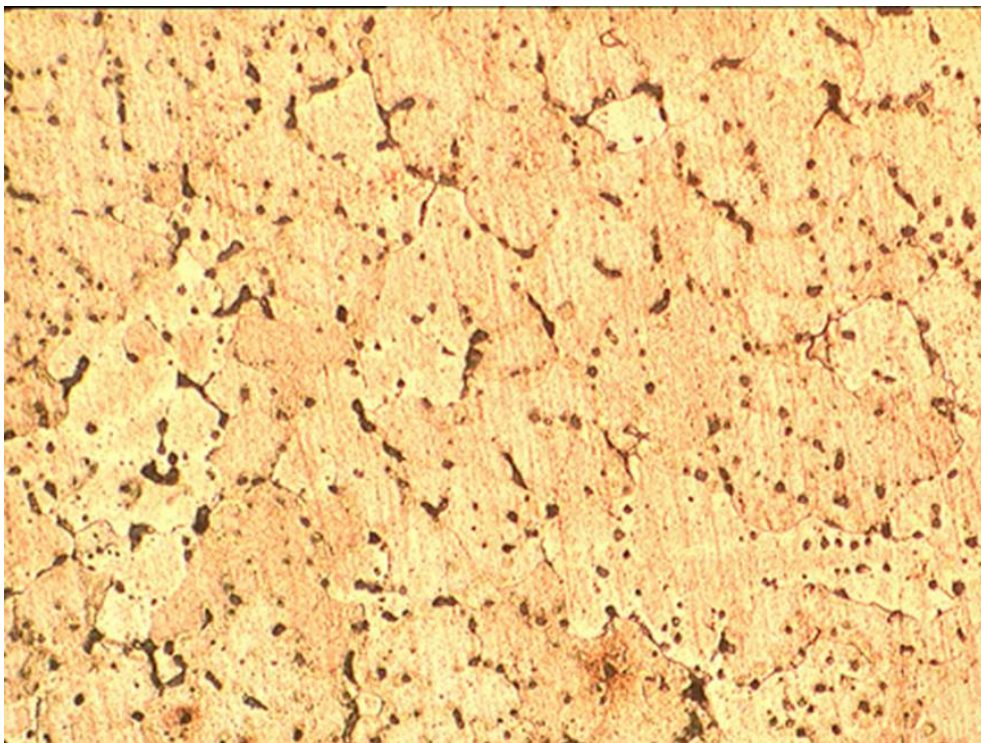


b: Image width 0.33mm

Figure B12. 2% Sn+2% Pb bronze, flame-warmed/air-cooled, showing a dendritic structure without $\alpha+\delta$ eutectoids. The size of the dendrites is uneven.

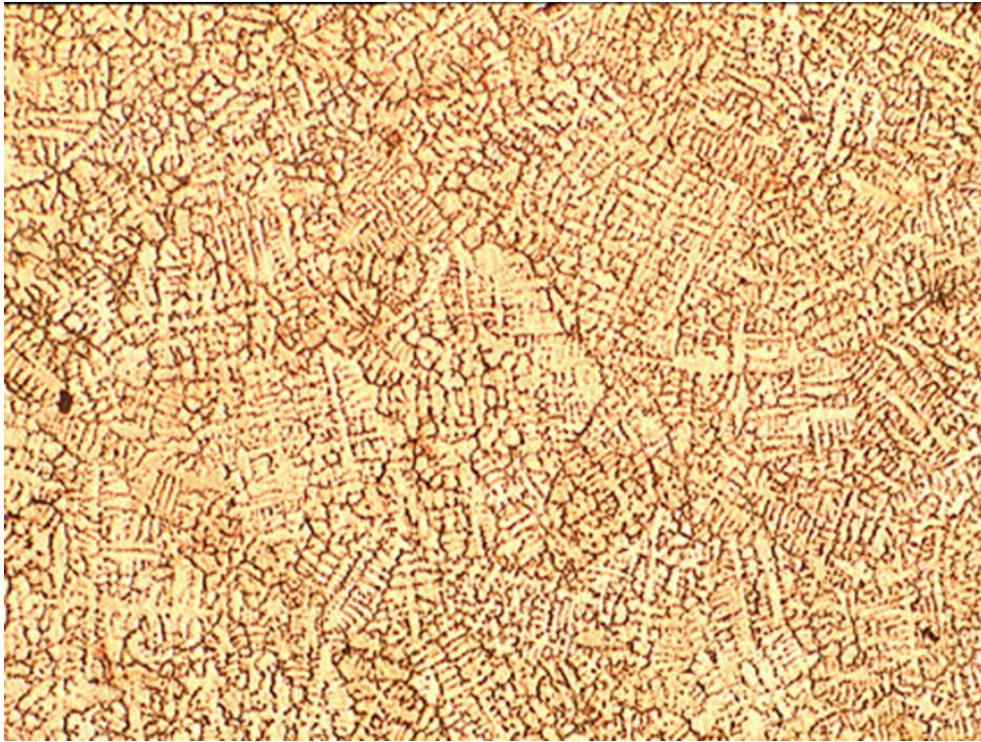


a: Image width 1.3mm

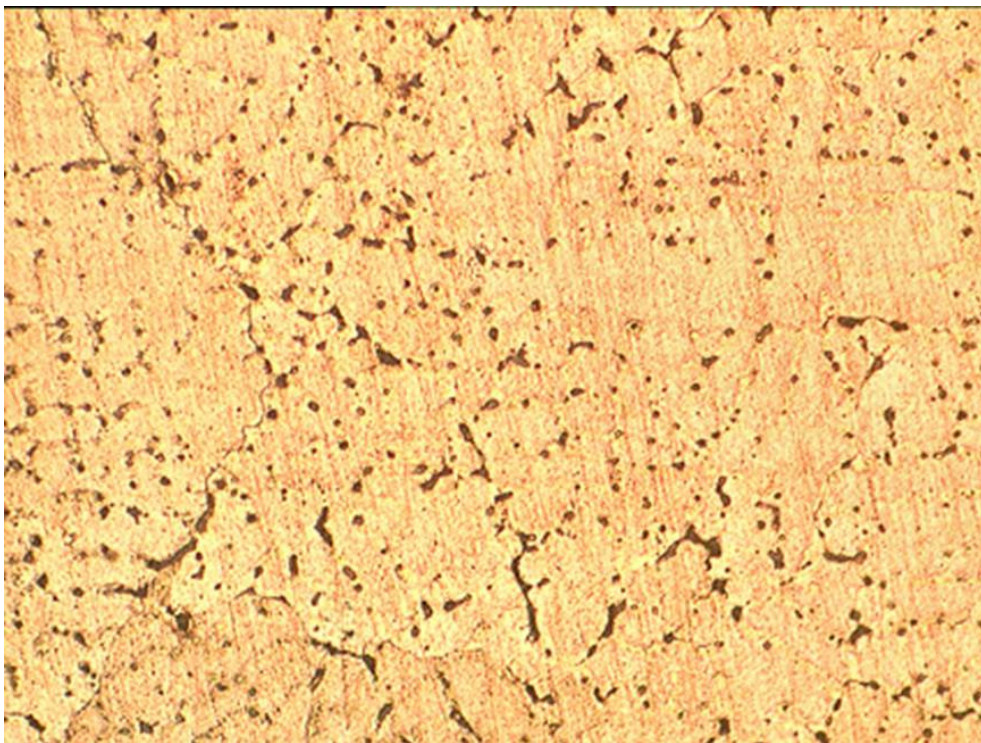


b: Image width 0.33mm

Figure B13. 2% Sn+6% Pb bronze, preheated/air-cooled, showing a dendritic structure without $\alpha+\delta$ eutectoids. The dendrites are very short.

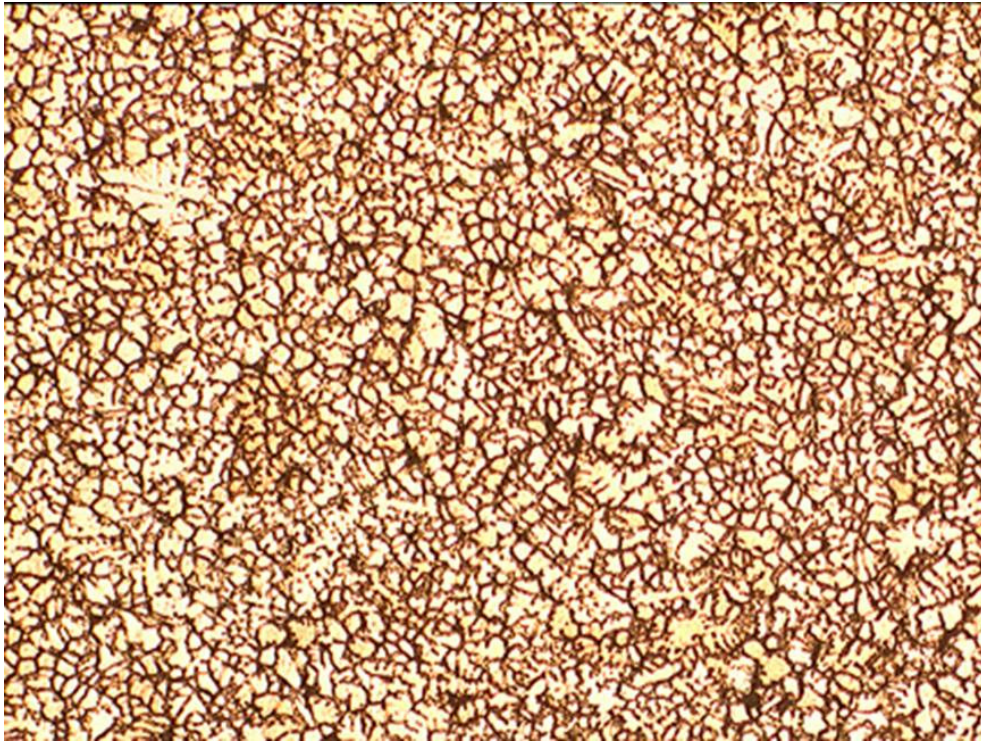


a: Image width 1.3mm

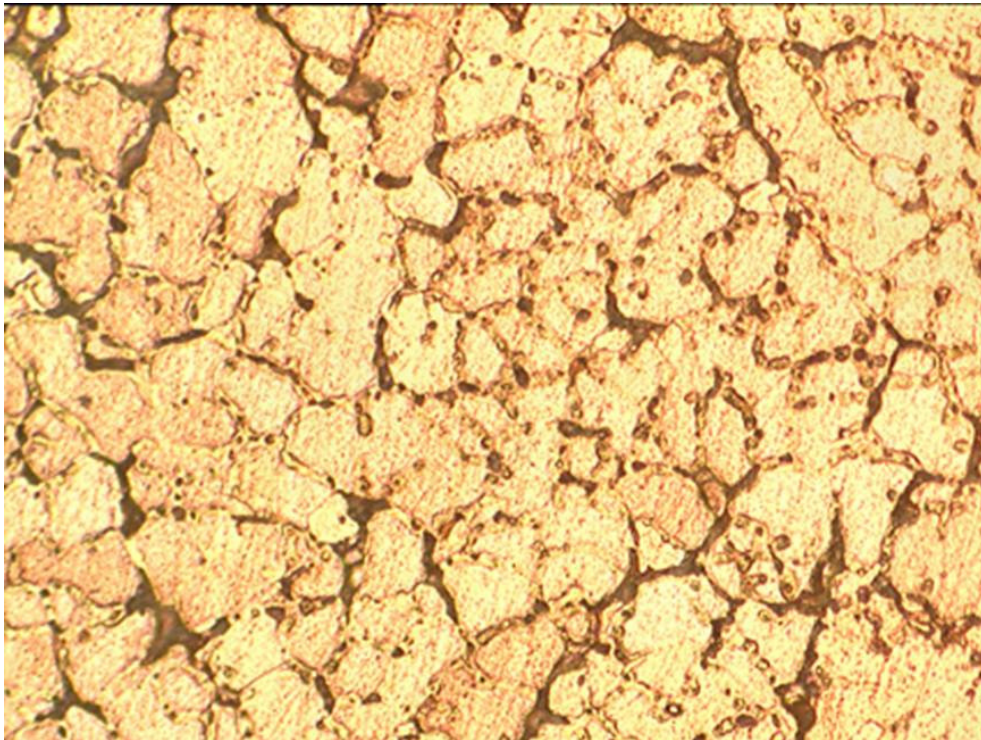


b: Image width 0.33mm

Figure B14. 2% Sn+6 %Pb bronze, flame-warmed/air-cooled, showing a more pronounced dendritic structure than the preheated/air-cooled bronze (B13).

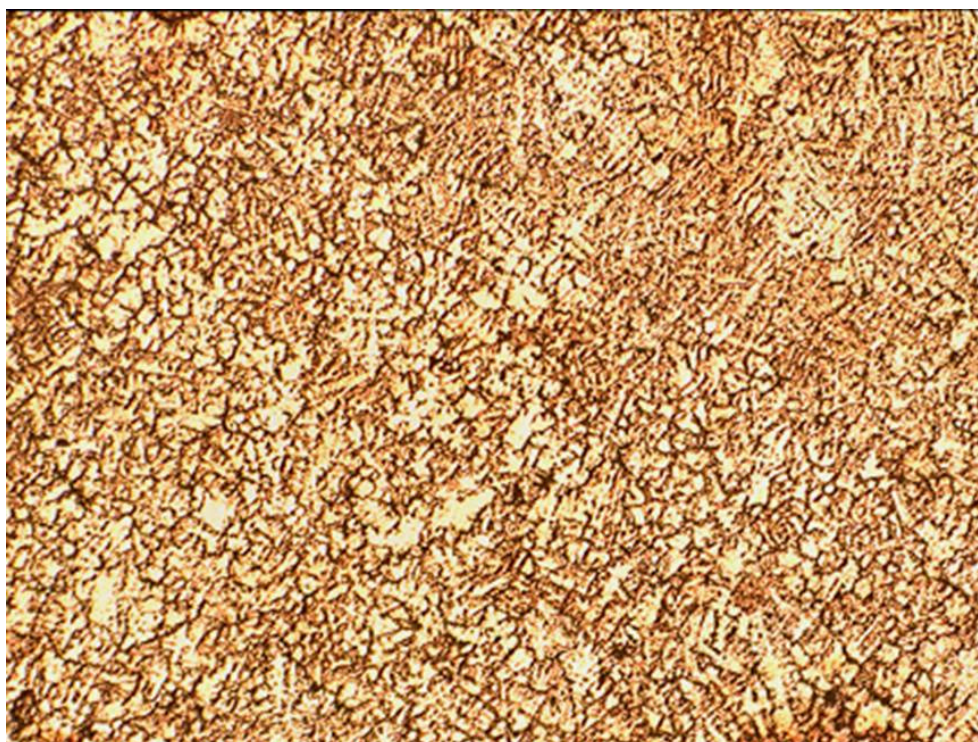


a: Image width 1.3mm

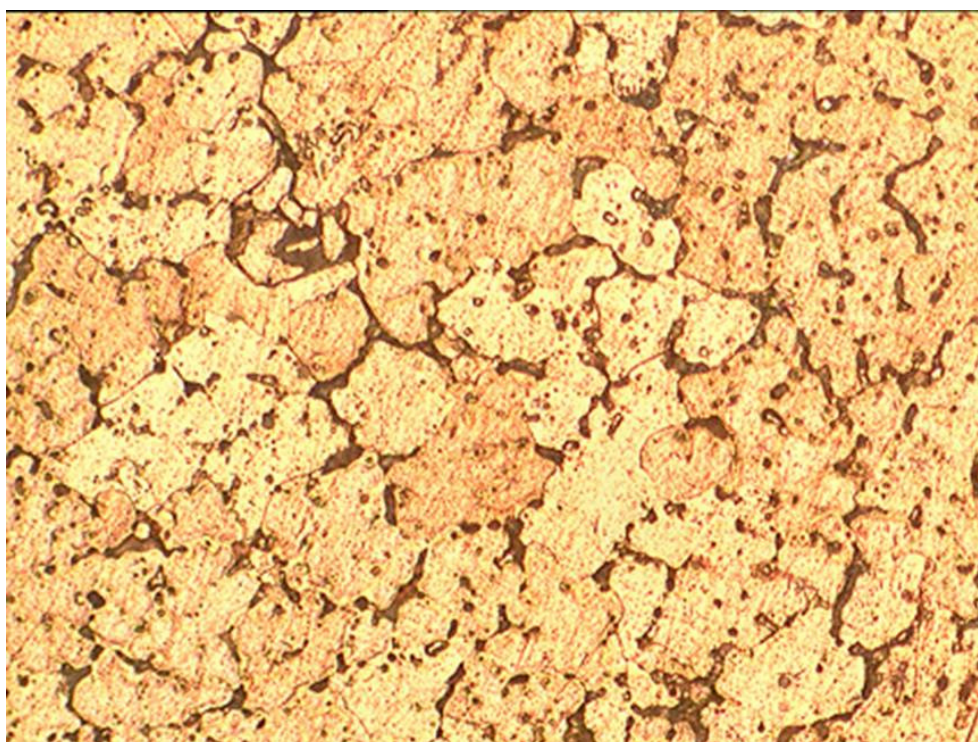


b: Image width 0.33mm

Figure B15. 2% Sn+10% Pb bronze, preheated/air-cooled, showing a dendritic structure without $\alpha+\delta$ eutectoids. Pb droplets are mainly on grain boundaries. The dendrites are very short.



a: Image width 1.3mm



b: Image width 0.33mm

Figure B16. 2% Sn+10% Pb bronze, flame-warmed/air-cooled, showing a similar structure to the preheated/air-cooled bronze (B15).

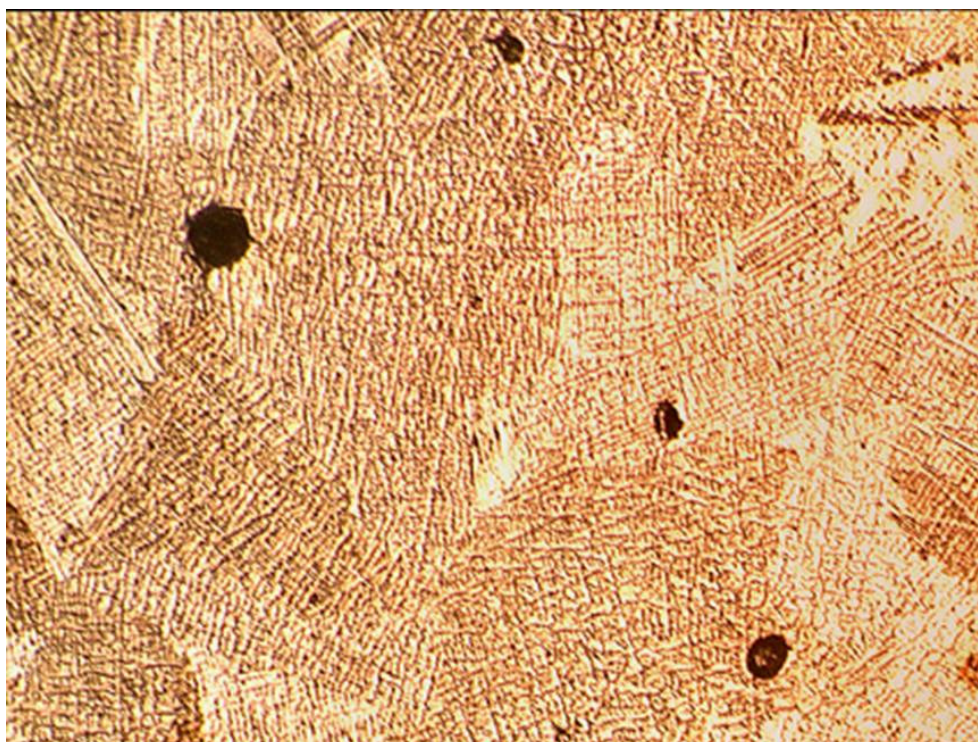
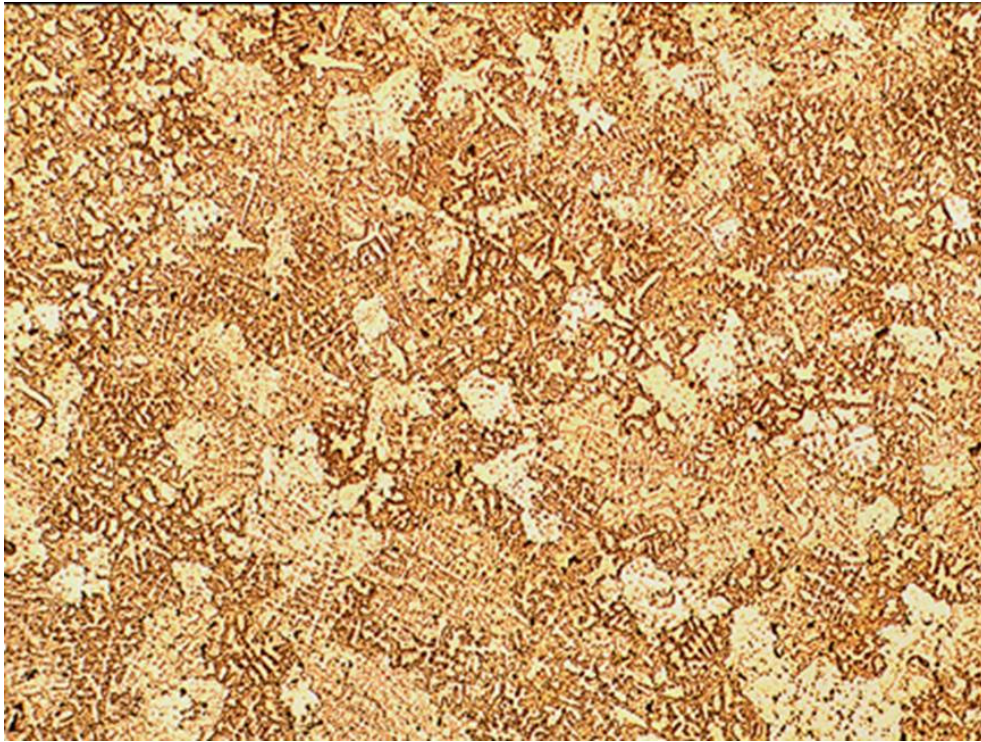


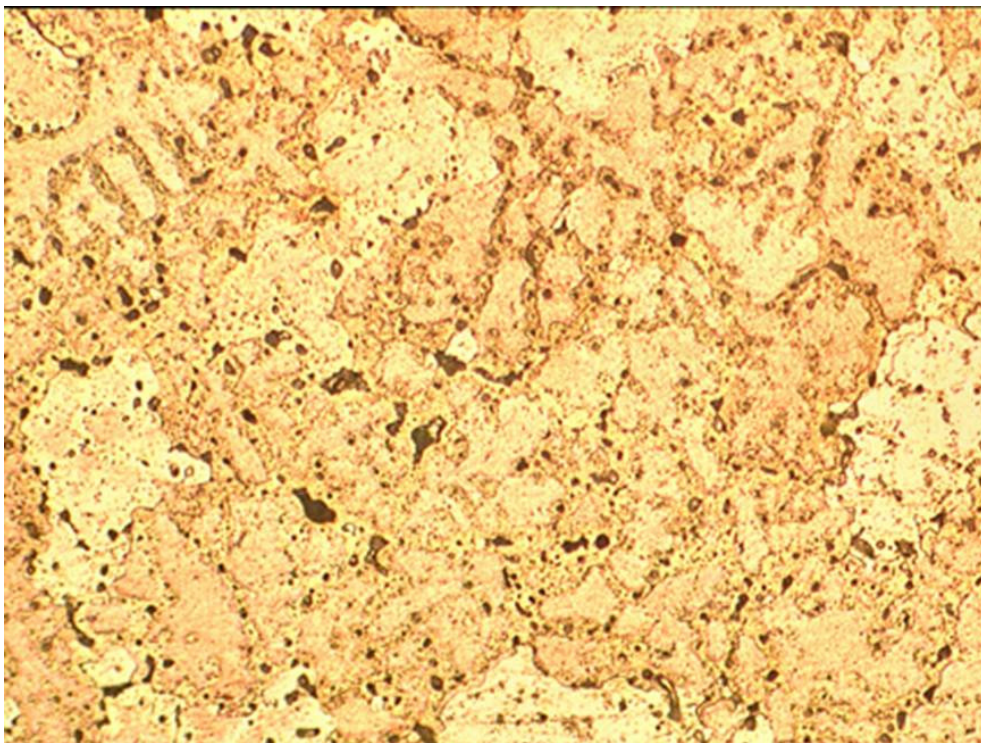
Figure B17. 6% Sn+2% Pb bronze, preheated/air-cooled, showing a dendritic structure without $\alpha+\delta$ eutectoids. Image width 1.3mm



Figure B18. 6% Sn+2% Pb bronze, flame-warmed/air-cooled, showing a similar structure to the preheated/air-cooled bronze (B17). Image width 1.3mm



a: Image width 1.3mm

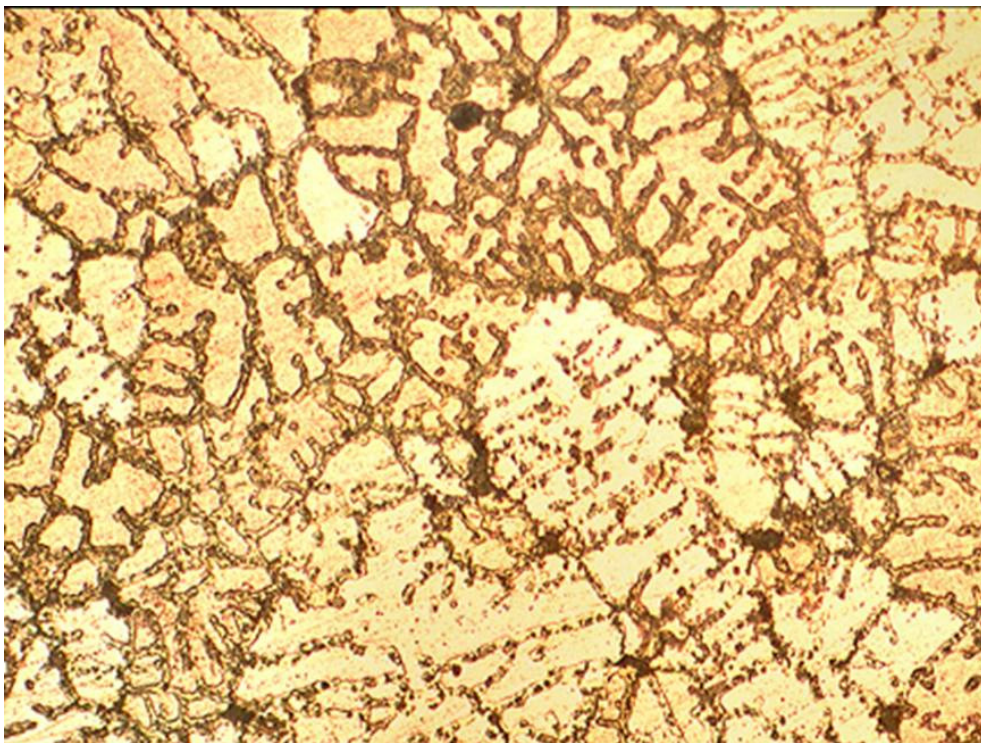


b: Image width 0.33mm

Figure B19. 6% Sn+6% Pb bronze, preheated/air-cooled, showing a dendritic structure with a few $\alpha+\delta$ eutectoids. Pb droplets are mainly on grain boundaries.

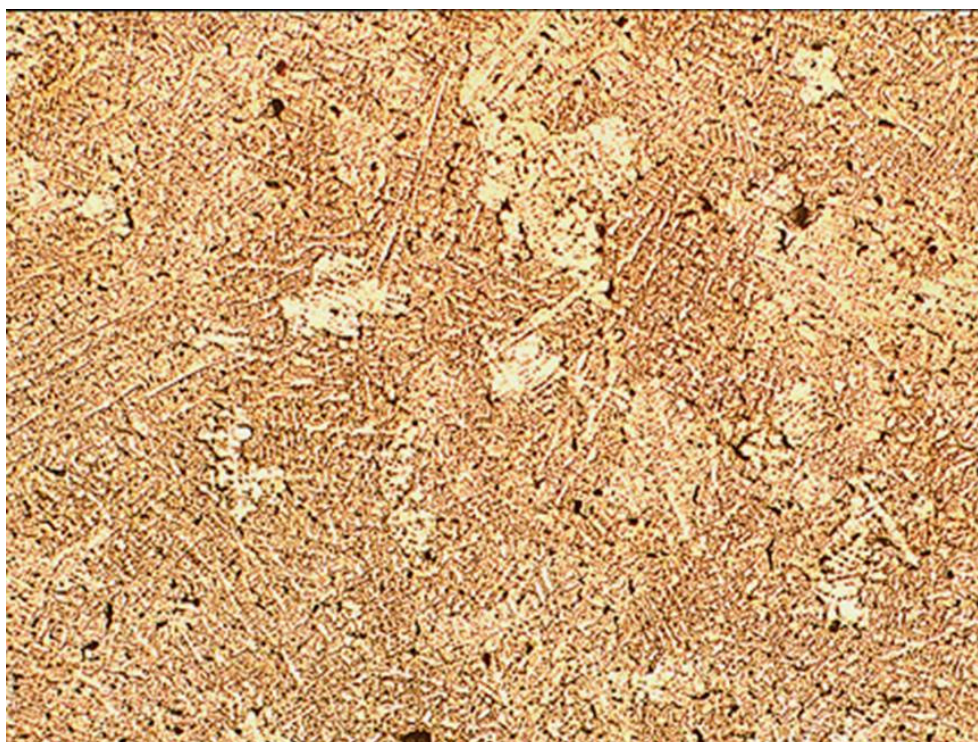


a: Image width 1.3mm

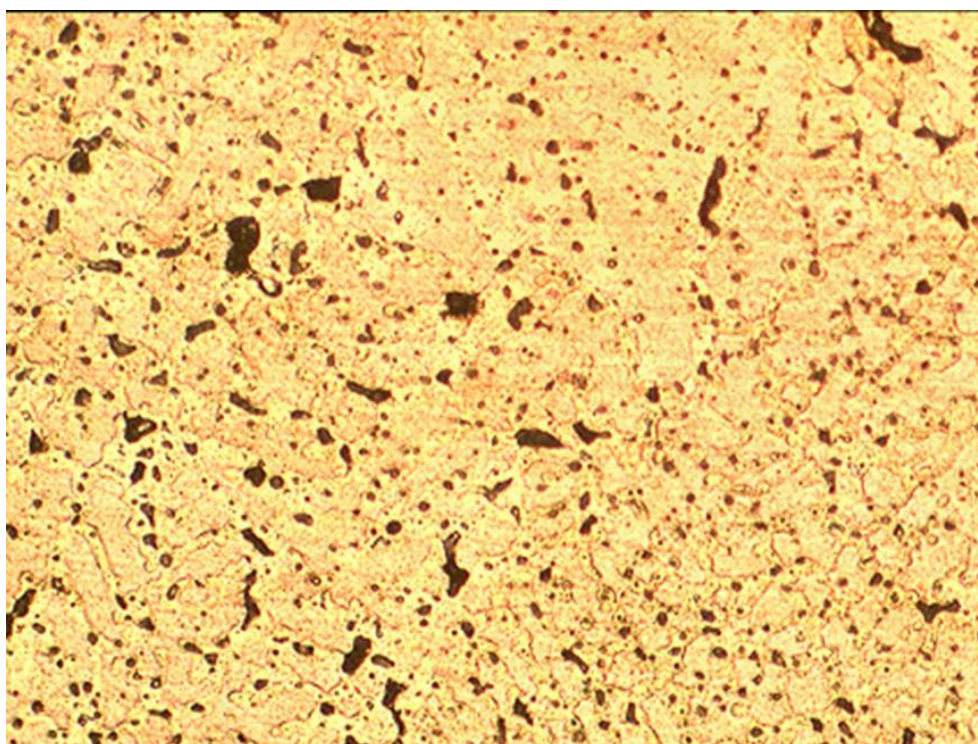


b: Image width 0.33mm

Figure B20. 6% Sn+6% Pb bronze, flame-warmed/air-cooled, showing a more pronounced dendritic structure with more $\alpha+\delta$ eutectoids than the preheated/air-cooled bronze (B19).

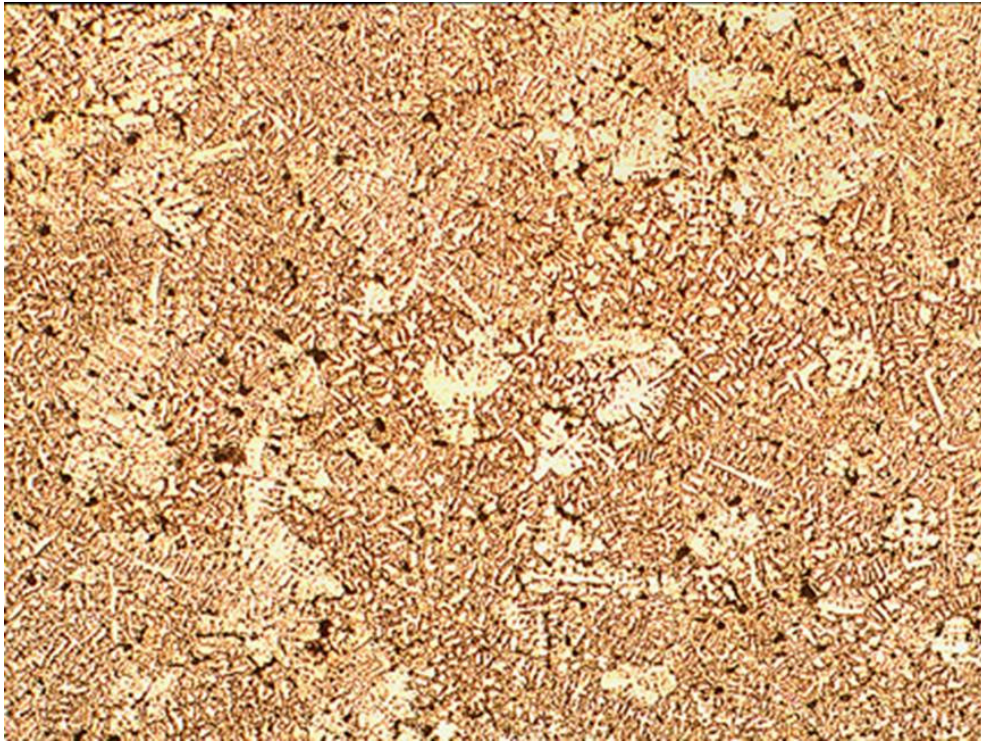


a: Image width 1.3mm

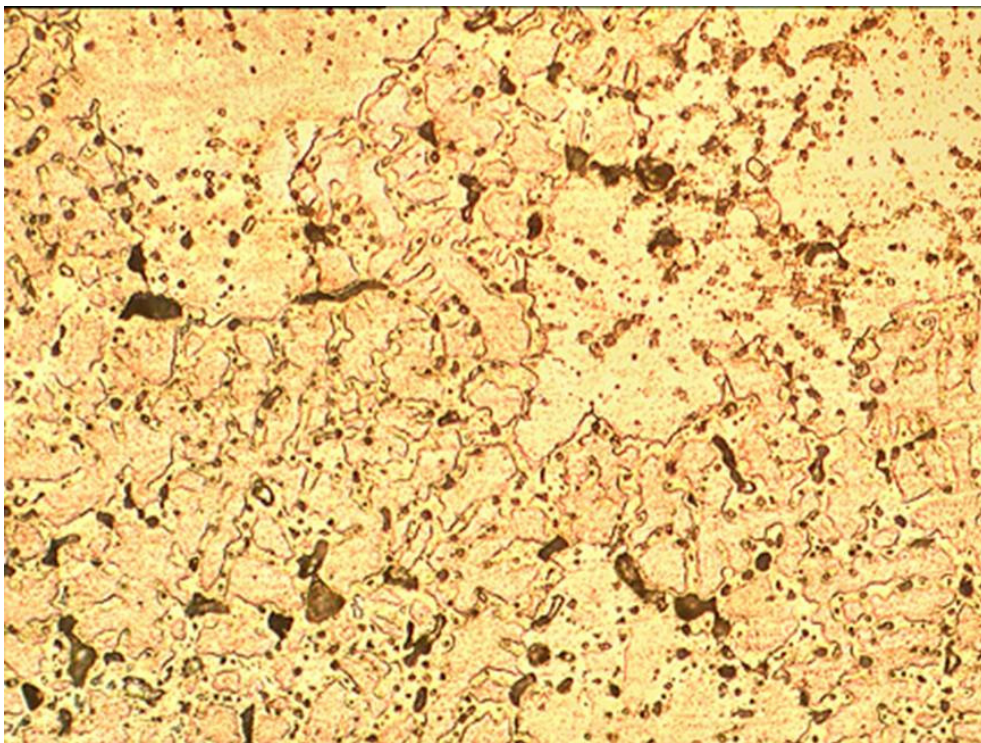


b: Image width 0.33mm

Figure B21. 6% Sn+10% Pb, preheated/air-cooled, showing a dendritic structure with a few $\alpha+\delta$ eutectoids.

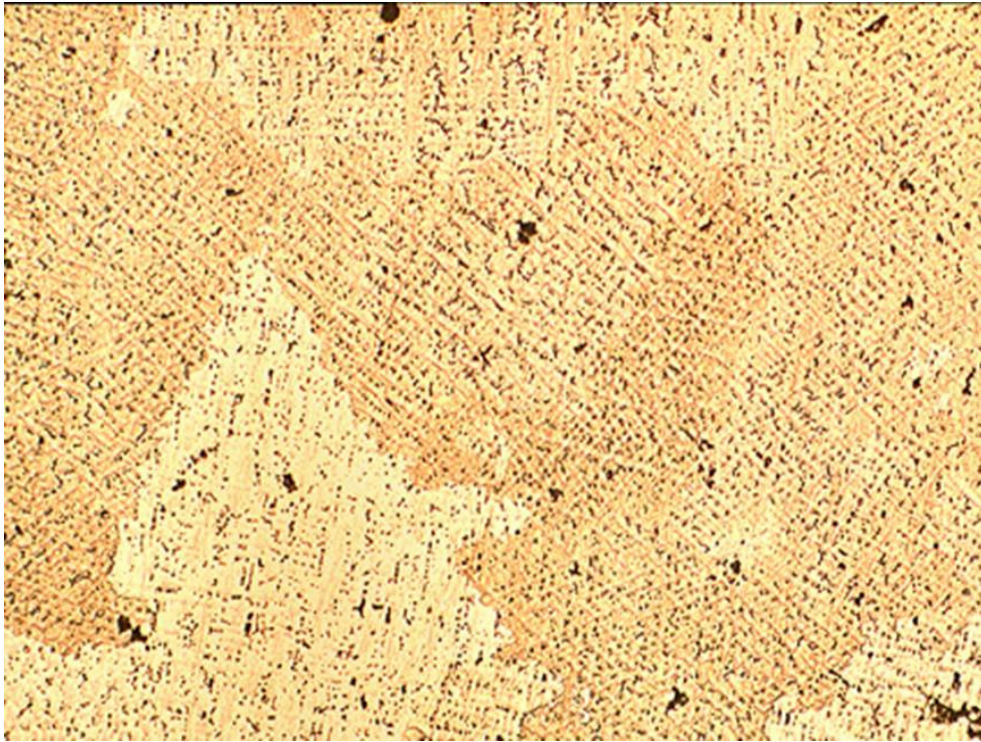


a: Image width 1.3mm

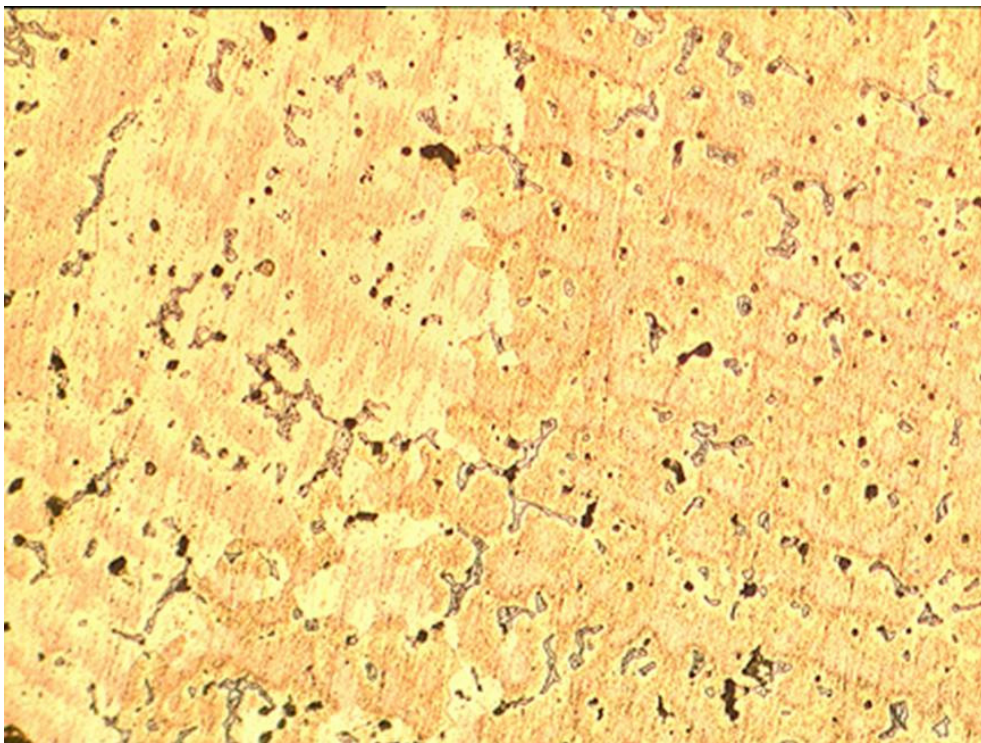


b: Image width 0.33mm

Figure B22. 6% Sn+10% Pb bronze, flame-warmed/air-cooled, showing a similar structure to the preheated/air-cooled bronze (B21).

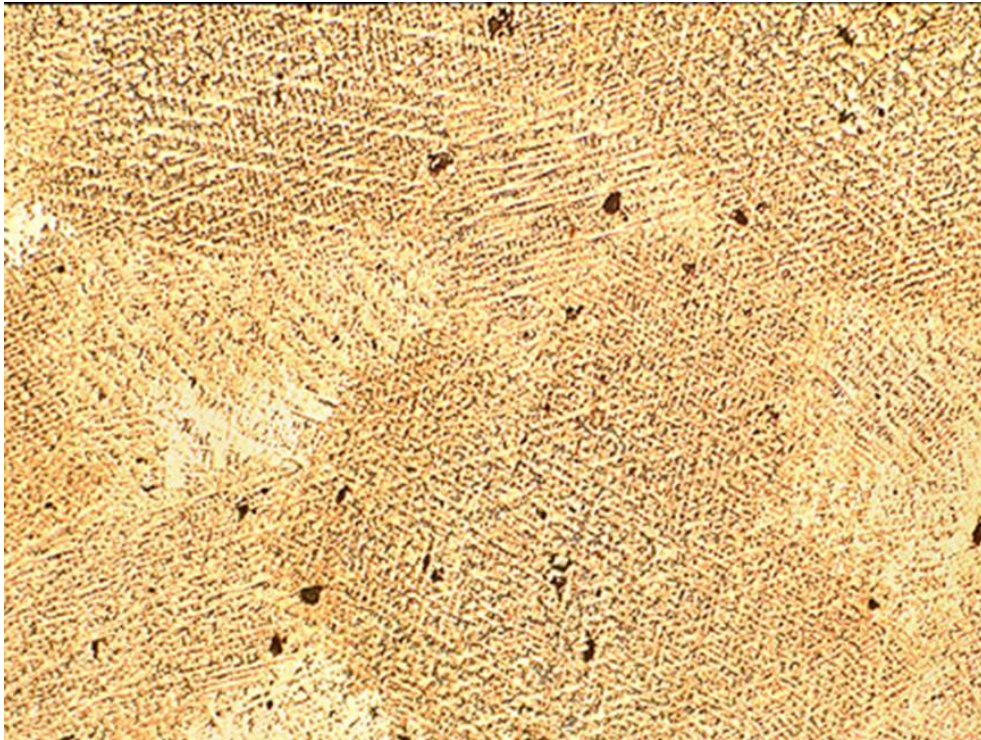


a: Image width 1.3mm

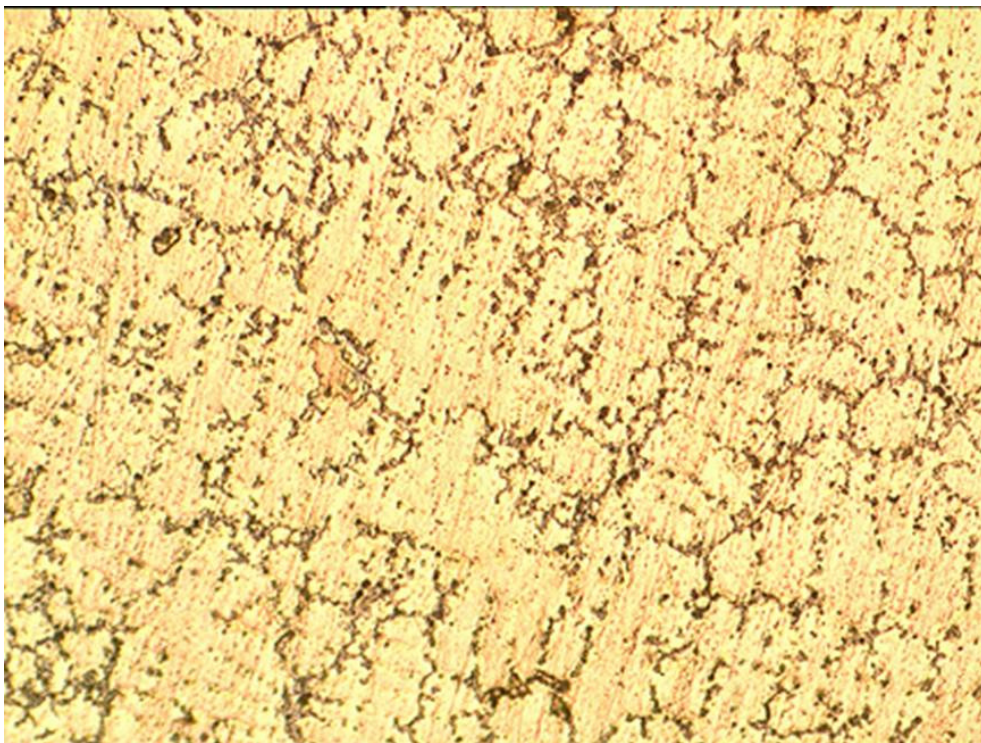


b: Image width 0.33mm

figure B23. 10% Sn+2% Pb bronze, preheated/air-cooled, showing a dendritic structure with $\alpha+\delta$ eutectoids.



a: Image width 1.3mm



b: Image width 0.33mm

Figure B24. 10% Sn+2% Pb bronze, flame-warmed/air-cooled, showing a dendritic structure with more $\alpha+\delta$ eutectoids than the preheated/air-cooled bronze (B23).