

EXTERNAL BROWNING



NETLIKE

Brown necrotic streaks (dashed-like), progressing from the stylar-end towards the pedicel-end of the berry.



CONTACT

Brown marks on the berry surface, where berries touch, often associated with square-like flattened areas at the pedicel-end of the berry.



MOTTLED

Brown blotches / spots on the berry surface.



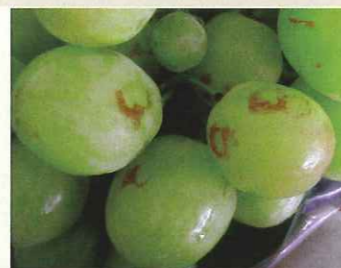
SUNBURN

Brownish colouration of the berry surface, as a result of direct exposure to and damage by the sun, often characterised by a leathery, rough touch.



FRICTION

Circle-like browning close to the pedicel area, associated with rolling of berries against each other.



PEACOCK SPOT

Brown circles, or half circles, with a clear centre, on the surface of berries where adjacent berries touch, with symptoms already present in the vineyard.



STYLAR-END RUSSET SPOTS

Brown russet-like damage at the stylar-end of the berry, characterised by irregular shaped spots, exhibiting a circular damaged area.



STYLAR-END NECROTIC SPOTS

Brown spots at the stylar-end of the berry, characterized by a slightly sunken necrotic tissue, often associated with secondary pathogenic infection.

LOW TEMPERATURE BROWNING



FREEZING DAMAGE external symptoms

Berries exhibit a brown, milky colour, while the rachis and laterals appear brown. Freezing often first appears on the rachis and laterals of the bunch.



COLD DAMAGE external symptoms

Berries and stems exhibit a light brown discolouration. Cold damage often first appears on berries or part of the bunch close to the vent openings of the box.

PHYSICAL BROWNING



BRUISING

Browning associated with bruising of berries, often characterised by flattened areas when bruising occurs on bunches within packed cartons of grapes.



ABRASIONS

Brown, scar-like tissue on the berry surfaces where physical damage has been inflicted, often by rubbing of stems or shoots against the berry, or by cultivation practices.

Browning of Table Grapes

A "Browning of Table Grapes" pamphlet has been developed as a tool to help with the identification of the different types of browning that occur on table grapes. This was developed by Dr Johan Fourie from ExperiCo under the auspices of the Table Grape Browning Research Programme and funded by South African Table Grapes (SAT).

The pamphlet is available on the following websites: www.dfpresearch.co.za and www.satgi.co.za

INTERNAL BROWNING



CHOCOLATE BERRY (external symptoms)

Originating from the stylar-end, progressing upwards towards the pedicel-end of the berry, with a clear distinct line between the affected and sound tissue.



WATER BERRY

Browning of berries, associated with desiccation, often related to damage to pedicels, starting at the pedicel-end, extending towards the stylar-end of the berry as the disorder progresses.



CHOCOLATE BERRY (external symptoms)

CHOCOLATE BERRY (internal symptoms)

Brown discolouration, originating mostly from the stylar-end of the berry, while in severe instances the whole berry may appear brown.



GLASSY BERRY (external symptoms)

GLASSY BERRY (internal symptoms)

Berries exhibiting a dull, translucent brown appearance, with browning progressing from the inside, outwards.

CHEMICAL BROWNING



METHYL BROMIDE DAMAGE

Browning symptoms associated with Methyl Bromide treatment (sound berries on the left).



CO₂ DAMAGE

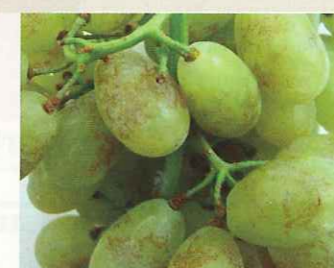
Yellow-brown discoloured areas of damage, often sunken, as result of high CO₂ gas modification or modified atmosphere treatment.

PATHOGENIC BROWNING



FUNGAL INFECTION

Brown lesions on the berry surface, associated with Botrytis and Alternaria infections.



FUNGAL INFECTION

Brown blemishes on the berry surface, associated with mildew infections.