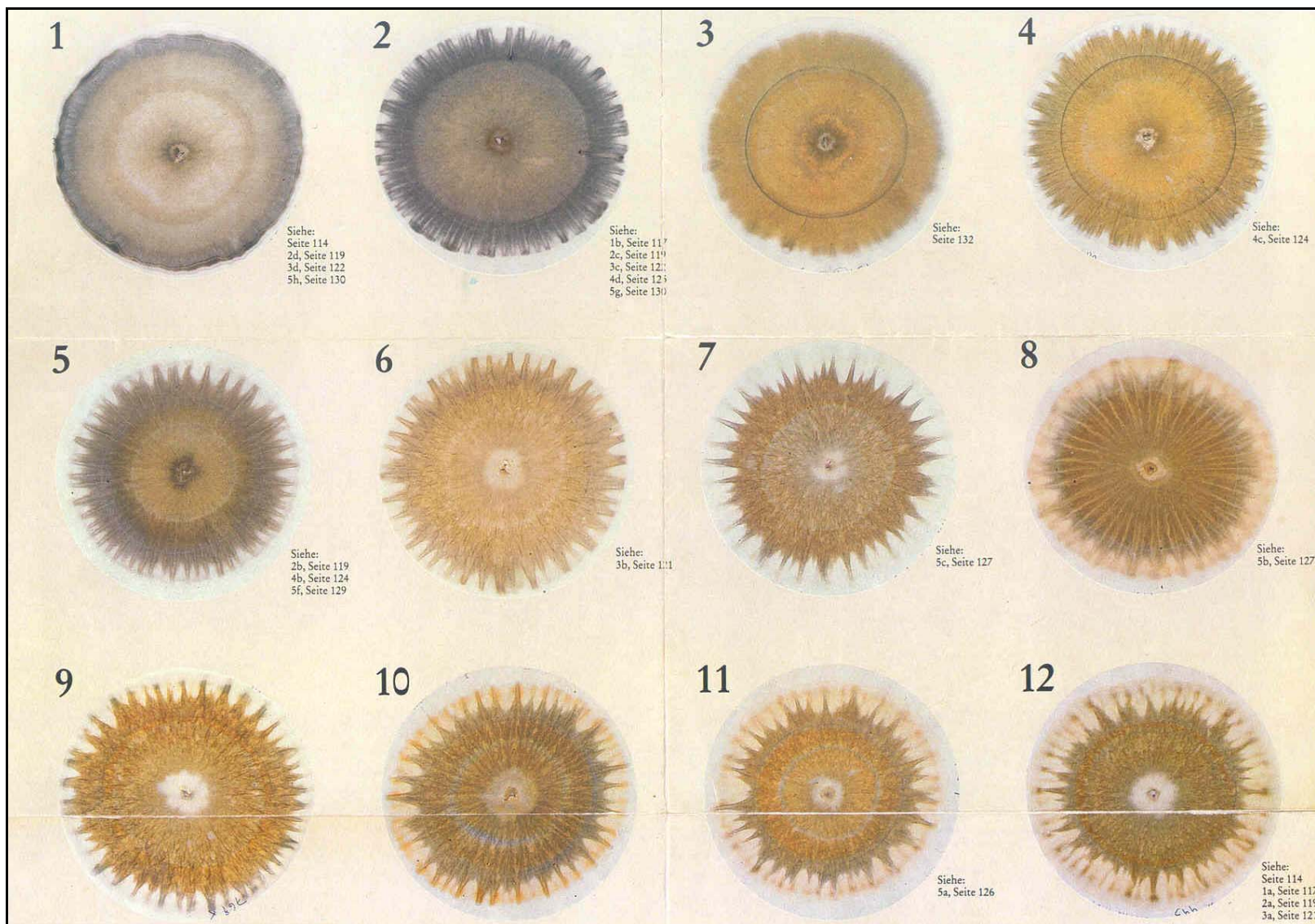


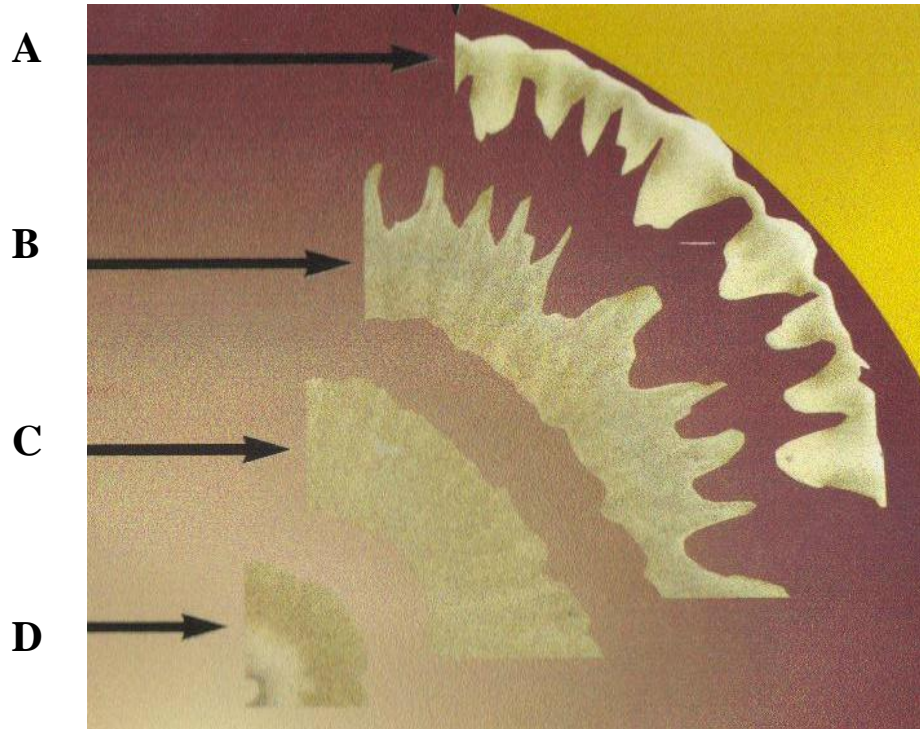
CHROMA STANDAARDREEKS



Chroma-onderzoeken

Een chroma geeft een beeld over de kwaliteit van bijvoorbeeld een bodem of compost. Een chroma bestaat uit 4 zones. Uit elke zone is een bepaald kwaliteitsaspect af te lezen.

In onderstaande figuur is per zone weergegeven welk kwaliteitsaspect er mee beoordeeld kan worden.



A: Buitenste zone: Geeft de humustoestand van de bodem weer. Geeft de toestand van de organische stof weer. Gaat het om verse onafgebroken organische stof of betreft het humus. Deze rand dient lichtbruin / beige te zijn er moeten wolkjes aanwezig zijn voor een goede humusvorm en humustoestand. Verse niet omgezette of verbrandde organische stof uit zich in een donker bruine rand in deze zone.

B: Middelste zone: Geeft een beeld van het bodemleven. Deze rand dient stekelig en voldoende breed te zijn. Is deze rand smal en bevat deze geen scherpe tanden, dan is het microleven in deze compost of grond niet of nauwelijks ontwikkeld.

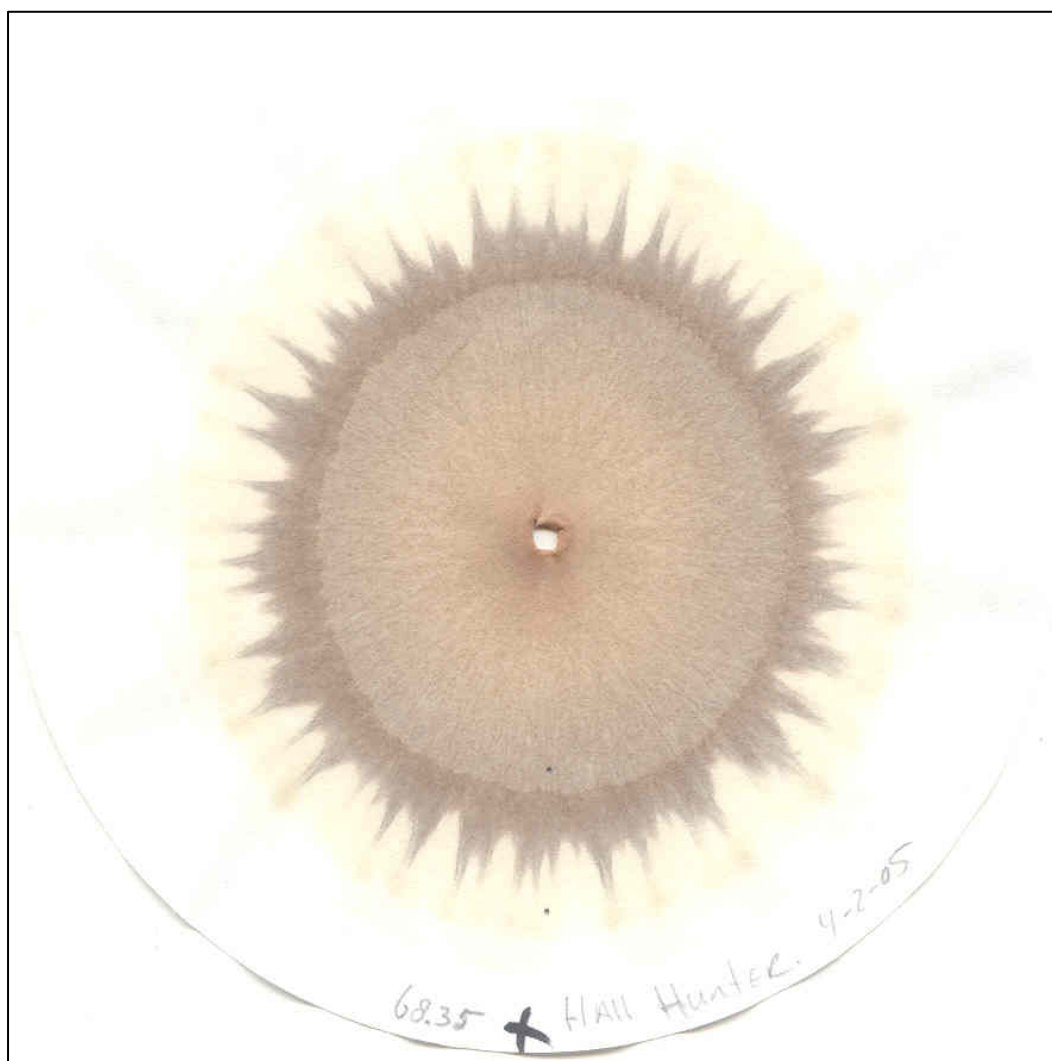
C: Binnenste zone: Geeft de doorluchting en het vochtvasthoudend vermogen van de bodem weer. Hiermee wordt de structuur bedoeld die door micro-organismen wordt gebouwd en niet door machines. Er dienen duidelijke radiaallijnen aanwezig te zijn. Dit zijn lijnen die van het midden van het chroma naar buiten lopen. Als deze lijnen niet aanwezig zijn, is de doorluchting van de grond en hiermee het vochtvasthouden vermogen niet op orde en zal deze grond waarschijnlijk verdicht zijn. Bij een compostchroma is dit tevens een indicatie voor de luchtigheid waarmee de compost is gemaakt. (Aërobe compostering)

D: Centrale zone: Geeft een beeld van de algemene bodemvruchtbaarheid. Deze zone moet wit van kleur zijn voor een goede bodemgesteldheid. Is deze bruin of donker van kleur, dan is de bodemgesteldheid verstoord.

Chroma analysis by Van Iersel Compost

Name	
Address	
Zip code	
City	

Sample no.	Sample name	Sample date	Sampled by



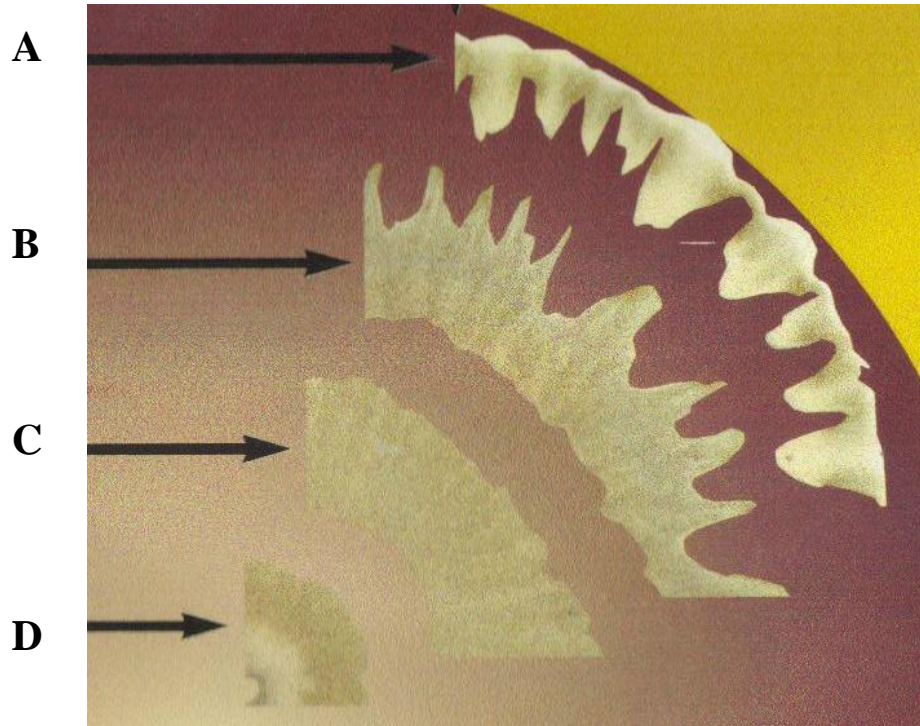
General judgement of the chroma regarding the standard series of the attachment.																								
	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	

On the following pages your chromatogram(s) will be given a mark from 1 up to 10.

Chroma analysis

A chroma gives a general view about the quality of for example a soil or compost. A chroma contains 4 zones. Each specific zone indicates a certain quality aspect.

The figure below shows and explains the quality aspect of each zone.



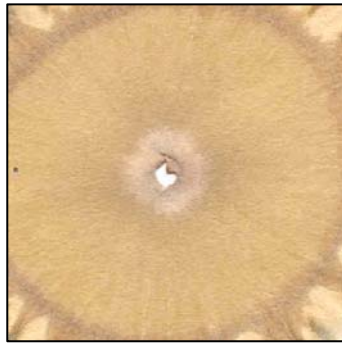
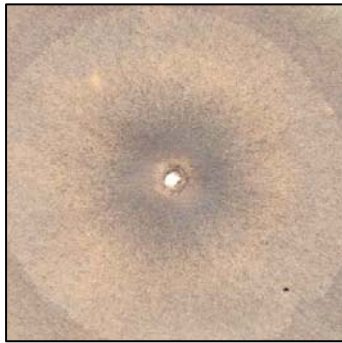
A: Outer zone: This zone indicates the condition of the humus in the soil. It shows the quality of the organic matter in the soil. This can differ from raw organic matter up to stable humus. In a soil with a good humus condition (stable humus), this zone shows a light brown / beige colour. Raw organic matter or burned organic matter (bad quality compost) shows a dark brown closed zone.

B: Middle zone: This zone shows the quality of the soil life. The zone should be evenly covered with prickles. The zone also needs to be wide enough. Does the zone show shallow prickles, or no prickles at all, then the soil life in this soil is not active enough or not present in good amounts.

C: Inner zone: This zone indicates the water / air holding capacity of the soil, as also the structure of the soil. This means the structure of the soil that is build by the soil life and not made by cultivating with machines. The zone should show clear lines that lead from the central zone up to the outer zone. Then the soil is well-structured en aerated. If the zone doesn't contain these lines, the soil might be compacted and doesn't have enough water holding capacity.

D: Central zone: This zone gives an indication of the general soil fertility. A fertile soil gives a white coloured zone. A chemically threatened soil will show a dark, small zone.

Central zone: This zone gives an indication of the general soil fertility. A fertile soil gives a white coloured zone. A disturbed soil will show a dark zone. When the zone is too small or too large in relation to the other zones, this will be a result of a bad composition of the soil.

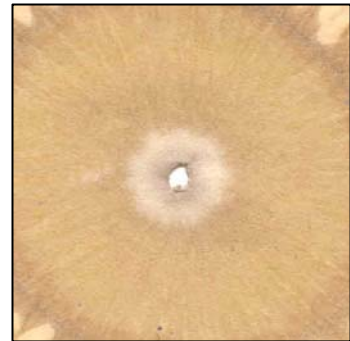
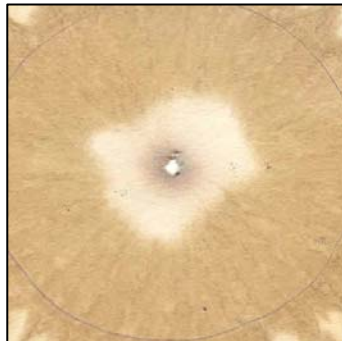
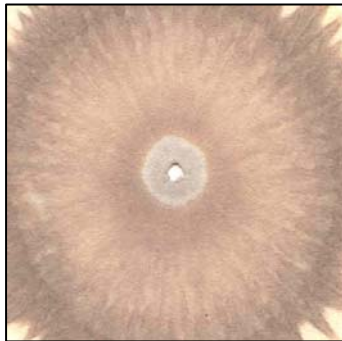


Dark coloured (bad)

Average coloured

White coloured (good)

1	2	3	4	5	6	7	8	9	10



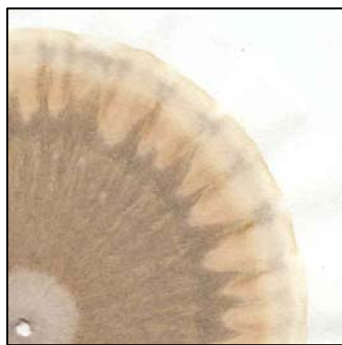
To small zone

To large zone

Ideal size

1	2	3	4	5	6	7	8	9	10
		X							

Inner zone: This zone indicates the water / air holding capacity of the soil, as also the structure of the soil. This means the structure of the soil that is built by the soil life and not made by cultivating with machines. The zone should show clear lines that lead from the central zone up to the outer zone. Then the soil is well-structured and aerated. If the zone doesn't contain these lines, the soil might be compacted and doesn't have enough water holding capacity.



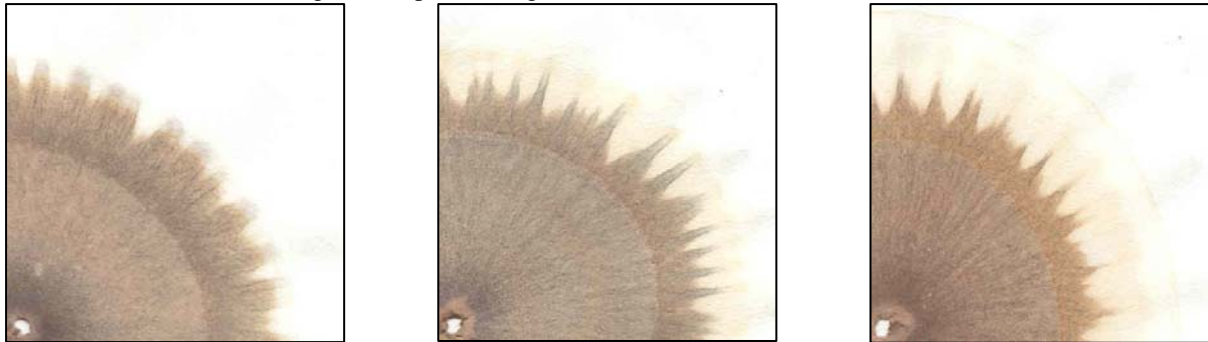
Bad soil structure and aeration

Average soil structure and aeration

Good soil structure

1	2	3	4	5	6	7	8	9	10

Middle zone: This zone shows the quality of the soil life. The zone should be evenly covered with prickles. The zone also needs to be wide enough. Does the zone show shallow prickles, or no prickles at all, then the soil life in this soil is not active enough or not present in good amounts.



Obtuse hazy prickles			Rather tapering prickles, small zone				Pointed prickles, wide zone		
1	2	3	4	5	6	7	8	9	10

Outer zone: This zone indicates the condition of the humus in the soil. It shows the quality of the organic matter in the soil. This can differ from raw organic matter up to stable humus.

In a soil with a good humus condition (stable humus), this zone shows a light brown / beige colour.

Raw organic matter or burned organic matter (bad quality compost) shows a dark brown closed zone.



Raw organic matter, dark spots			Half degraded organic matter				Humus, beige humus spots			
No O.M.	1	2	3	4	5	6	7	8	9	10



No humus spots present			Poorly humus spots present				Humus spots		
1	2	3	4	5	6	7	8	9	10

The colour of the outer zone gives an indication about the quality of the humus condition. When this zone is dark brown and narrow, then the humus building process isn't right yet. When the outer zone is small and is between the prickles instead of above the prickles, then the humus building process also isn't optimal. Only when the colour of the zone is beige and the zone is wide enough and placed on the prickles, then the humus building process is optimal. In this situation there have to be humus spots on the ends of the prickles as well.



Dark narrow zone that is placed between the prickles.



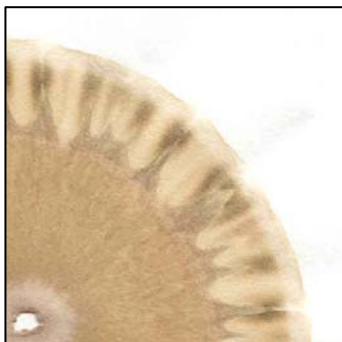
Light coloured, narrow zone



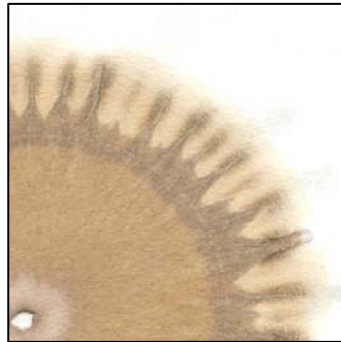
Beige coloured, wide zone with humus spots on the prickles.

1	2	3	4	5	6	7	8	9	10

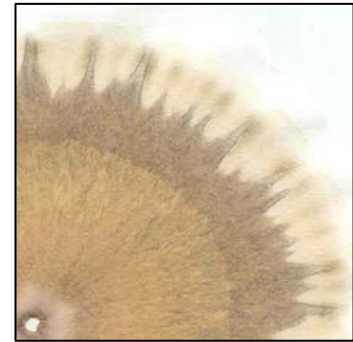
Ratio between the zones: The wideness of the zones should be in ratio with each other at a balanced soil. If one zone is small or narrow and the other one is wide or large, than the chroma is out of balance. This means that the soil is also not yet in balance. A chroma with a good spreading of the zones is an indication of a balanced soil.



Poor balance between zones



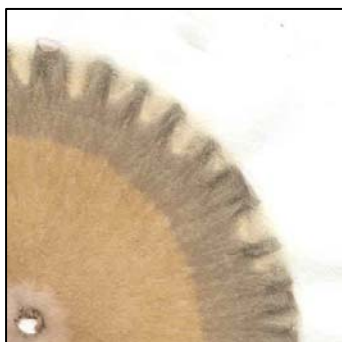
Average balance between zones



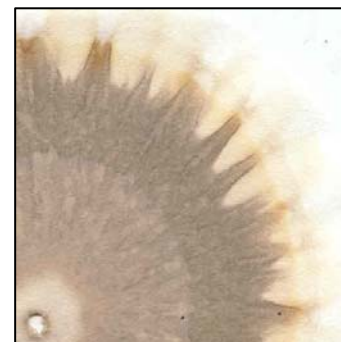
Good balance between zones

1	2	3	4	5	6	7	8	9	10

Transition between the zones: When the soil is in balance, the zones of the chroma will fluently blend into each other. This property will only show itself when the soil is already in a high quality condition.



No fluently transition



Average fluently transition



Fluently transition

1	2	3	4	5	6	7	8	9	10