

Mutu Kopi Tanggungjawab Bersama (*Coffee Quality Is Our Responsibility*)



Yang merah saja !!!



**Petik buah
hijau ?
Jangan !!!**



CACAT MUTU BIJI KOPI INDONESIA

DEFECTS of COFFEE BEANS from INDONESIA

13,48 % Berlubang (Hama Bubuk Buah) / 36,94 % Hitam (Petik Muda) / 7,85 % Pecah (Huller Kurang Tepat) / 37,70 % Warna Coklat, Berkulit Ari, Bertutul-tutul (Fermentasi Dan Huller Kurang Tepat) / 3,83 % Berbatu, Bergelondong, Campur kerikil-Tanah (Sortasi Longgar)

(13.48% holey (Chery Pest borer) / 36.94% Black bean (Green/young chery) / 7.85% Broken (Huller Less Proper) / 37.70% Brown Color, Silver skinned, spotted-leopard (Fermentation And Huller Less precise) / 3.83% Rocky, dried crery, Mixed gravel (Sorting Loosely)



300 gram contoh kopi biji (*gram of coffee beans sample*)

SNI 01-2907-2008 (*Indonesian National Standard*)

Klasifikasi Mutu Berdasarkan Sistem Nilai Cacat
Quality classification system is based on the defects value

Mutu / Grade	Syarat Mutu (<i>Quality requirement</i>)	
Mutu / Grade 1	Jumlah nilai cacat maksimum (<i>Maximum total defects value</i>)	11
Mutu / Grade 2	Jumlah nilai cacat (<i>Total defects value</i>)	12 - 25
Mutu / Grade 3	Jumlah nilai cacat (<i>Total defects value</i>)	26 - 44
Mutu / Grade 4-a	Jumlah nilai cacat (<i>Total defects value</i>)	45 - 60
Mutu / Grade 4-b	Jumlah nilai cacat (<i>Total defects value</i>)	61 - 80
Mutu / Grade 5	Jumlah nilai cacat (<i>Total defects value</i>)	81 - 150
Mutu / Grade 6	Jumlah nilai cacat (<i>Total defects value</i>)	151 - 225

Penentuan Besarnya Nilai Cacat Kopi

The Defects Value Determination of Coffee Beans

No.	Jenis cacat (<i>Defects</i>)	Nilai cacat (<i>Defects Value</i>)
1.	1 (satu) biji hitam (<i>black beans</i>)	1 (satu)
2.	1 (satu) biji hitam sebagian (<i>partly black beans</i>)	$\frac{1}{2}$ (setengah)
3.	1 (satu) biji hitam pecah (<i>broken black beans</i>)	$\frac{1}{2}$ (setengah)
4.	1 (satu) kopi gelondong (<i>dried chery</i>)	1 (satu)
5.	1 (satu) biji coklat (<i>Sour beans</i>)	$\frac{1}{4}$ (seperempat)
6.	1 (satu) kulit kopi ukuran besar (<i>Large husk</i>)	1 (satu)
7.	1 (satu) kulit kopi ukuran sedang (<i>medium husk</i>)	$\frac{1}{2}$ (setengah)
8.	1 (satu) kulit kopi ukuran kecil (<i>small husk</i>)	$\frac{1}{5}$ (seperlima)
9.	1 (satu) biji berkulit tanduk (<i>parchment beans</i>)	$\frac{1}{2}$ (setengah)
10.	1 (satu) kulit tanduk ukuran besar (<i>large parchment</i>)	$\frac{1}{2}$ (setengah)
11.	1 (satu) kulit tanduk ukuran sedang (<i>medium parchment</i>)	$\frac{1}{5}$ (seperlima)
12.	1 (satu) kulit tanduk ukuran kecil (<i>small parchment</i>)	$\frac{1}{10}$ (sepersepuluh)
13.	1 (satu) biji pecah (<i>broken beans</i>)	$\frac{1}{5}$ (seperlima)
14.	1 (satu) biji muda (<i>imature beans</i>)	$\frac{1}{5}$ (seperlima)
15.	1 (satu) biji berlubang satu (<i>one hole beans</i>)	$\frac{1}{10}$ (sepersepuluh)
16.	1 (satu) biji berlubang lebih dari satu (<i>some holed beans</i>)	$\frac{1}{5}$ (seperlima)
17.	1 (satu) biji bertutul-tutul (untuk proses basah)	$\frac{1}{10}$ (sepersepuluh)
18.	1 (satu) ranting, tanah atau batu berukuran besar (<i>large size of branches, soil or stone</i>)	5 (lima)
19.	1 (satu) ranting, tanah atau batuberukuran sedang (<i>medium size of branches, soil or stone</i>)	2 (dua)
20.	1 (satu) ranting, tanah atau batuberukuran kecil (<i>small size of branches, soil or stone</i>)	1 (satu)

Dasar Penentuan Besarnya Nilai Cacat Kopi

The basis determination of defects value of coffee beans

1 black bean	1
2 sour or rancid beans	1
2 beans in parchment	1
1 cherry	1
1 large husk	1
2–3 small husks	1
3 shells	1
1 large stone/earth clod	5
1 medium-sized stone/earth clod	2
1 small stone/earth clod	1
1 large stick	5
1 medium-sized stick	2
1 small stick	1
5 broken beans	1
5 green or immature beans	1
5 insect damaged beans	1



KONTES KOPI SPESIALTY INDONESIA KE 1 DI JAKARTA 2008
(The 1st Indonesian Specialty Coffee Contest, Jakarta 2008)

KONTES KOPI SPESIALTI INDONESIA KE 3 DI DENPASAR – BALI 2010

(The 3rd Indonesian Specialty Coffee Contest Denpasar – Bali 2010)





KONTES KOPI SPESIALTI INDONESIA KE 4 DI JAKARTA, 2011
(The 4th Indonesian Specialty Coffee Contest, Jakarta 2011)

Spesialti Indonesia Ke - 5

Asian Specialty Coffee Contest

Sponsor :



Partner:



Organizer

MELAL M
Meetings . Incentives . Conventions . E



KONTES KOPI SPESIALTI INDONESIA KE-5 DI DENPASAR-BALI 2012
(The 5th Indonesian Specialty Coffee Contest, Denpasar-Bali 2012)



Lelang Kopi Spesialti Indonesia Ke-1 2010 Di Bali
(The 1st Indonesia Specialty Coffee Auction, Bali, 2010)



Lelang Kopi Spesialti Indonesia Ke-2 2012 Di Surabaya
(The 2nd Indonesia Specialty Coffee Auction, Surabaya, 2012)



Bismillah



Pengolahan Kopi Hulu
(*Primary Coffee Processing*)

Yusianto

**Pusat Penelitian Kopi
Dan Kakao Indonesia**

***Indonesian Coffee and
Cocoa Research
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Perbandingan Beberapa Cara Pengolahan				
Pengolahan Basah Giling Kering (<i>West Indische Bereiding</i> = WIB)	Pengolahan Basah Giling Basah (<i>Wet Hulling</i>) (Cara Sumatera)	Pengolahan Setengah Basah (Semi Wash / Pulp Natural)	Pengolahan kering Buah Kopi Gelondong (Natural)	Pengolahan kering Buah Kopi Pecah Kulit
Buah Kopi	Buah Kopi	Buah Kopi	Buah Kopi	Buah Kopi
Sortasi Manual	Sortasi Manual	Sortasi Manual	Sortasi Manual	Sortasi Manual
Sortasi Buah Kopi Dengan Air	Sortasi Buah Kopi Dengan Air	Sortasi Buah Kopi Dengan Air	Penjemuran (KA $\approx$ 14 %)	Pemecahan Buah Kopi Dengan Mesin Kneuzer
Pulper	Pulper	Pulper	Huller	Penjemuran (KA $\approx$ 12 %)
Fermentasi Dan Pencucian	Fermentasi Dan Pencucian	Penjemuran Kopi Gabah (KA $\approx$ 12 %)	Kopi Beras Kering	Huller
Penjemuran Sampai Kering (KA $\approx$ 12 %)	Penjemuran Tahap I (KA $\approx$ 30 %)	Huller		Kopi Beras Kering
Huller	Huller	Kopi Beras Kering		
Kopi Beras Kering	Penjemuran Kopi Labu (KA $\approx$ 12 %)			
	Kopi Beras Kering			



KOPI DARI TANAMAN HINGGA HASIL SANGRAI
(Coffee : Plant – Cherry- Beans- Roasted)



FAKTOR-FAKTOR YANG MEMPENGARUHI MUTU KOPI (*Coffee Quality Determined Factors*)

- **VArietas/Klon (*Varieties/Clones*)**
 - Varietas tertentu dapat menghasilkan mutu fisik dan citarasa baik, akan tetapi ada juga sebaliknya (*Certain varieties may produce good physical quality and taste, but there are also the opposite*).
- **Tinggi Tempat Penanaman (*Altitude*)**
 - Makin tinggi tempat penanaman mutu citarasanya akan semakin baik (*Higher altitude, better flavor*)
- **Kejaguran Tanaman (*Plant Healthiness*)**
 - Tanaman yang pertumbuhannya kurang sehat akan menghasilkan mutu fisik dan citarasa yang kurang baik (*Plants that grow less healthy will result in physical quality and the taste is not good*)
- **Penggunaan Penaung (*Shading Tree*)**
 - Tanaman kopi yang dinaungi cukup citarasanya lebih baik dibanding dengan yang tanpa dinaungi (*Coffee plants with shaded tree will produce better flavor than those without shaded tree*).

FAKTOR-FAKTOR YANG MEMPENGARUHI MUTU KOPI (*Coffee Quality Determined Factors*)

- **Tingkat serangan hama dan penyakit (*Pest and disease*)**
 - Serangan hama dan penyakit dapat menurunkan mutu fisik maupun citarasa kopi biji (*Pests and diseases can reduce the physical quality and flavor of the coffee beans*).
- **Mutu petik buah (*Harvesting Method*)**
 - Buah yang dipetik pada saat masak optimal mutu fisik dan citarasa lebih baik dibanding dengan buah yang dipetik racut (*Selected picking of coffee chery will produce better flavor than not selected picking*)..
- **Cara Penanganan Pasca Panen (*Post Harvest / Processing*)**
 - Pengolahan basah akan menghasilkan mutu lebih baik dibanding olah kering. Penyimpanan buah kopi yang kurang baik dapat menimbulkan cacat rasa. (*Wet processing will produce better quality than if dry process. Poor storage of coffee chery may be cause defects on the flavor*).



Pasukan Panen Terkini

(Worker for reaping the harvest)

CITARASA KOPI tergantung pada
(COFFEE flavor depends on)

□ Jenis/klon/varietas Tanaman.
Origin/daerah/wilayah Asal/Ketinggian.
Metode Budidaya Tanaman. Kesehatan
Tanaman. Kondisi Buah Kopi Saat Dipetik.
Pengolahan Pasca Panen. (Pulping,
Fermentasi, Pengeringan Dll.). Pengemasan,
Penggudangan, Pengangkutan.
Penyagraian Dll.

□ (Type / clones / varieties of plants. Origin /
area / region of origin / Height. Cultivation
method. Plant Health. Picked Current
conditions Coffee chery. Post-harvest
processing. (Pulping, fermentation, drying
Etc.). Packaging, storage, Freight.
Penyagraian Etc.)



Tempoh doeloe

Perhatian semua karyawan

Tangkap yang petik hijau !!!

**Penjaga Harus
Sungguh-sungguh**





Arabika :
Aroma Tajam Flavor Bagus
Floral, Flowery, Honeyed,
Acidity Kuat, Mild
(*Arabica : Strong fragrance*
& Aroma, Floral, Flowery,
Honeyed, Good Acidity,
***Mild*)**



KOPI ARABIKA KOMASTI (KOMPOSIT ANDUNGSARI TIGA)







BP 936



BP 534



BP 939



BP 436



BP 920



Robusta : Aroma Datar, Flavor Datar, Chocolaty, Karamelly, Pahit, Sepat, Body Kuat
(Robusta : Flat Aroma & Fragrance, Chocolaty, Caramelly, Bitter, Astringent, Heavy Body)

Untuk Dataran Rendah – Menengah
(Low – Medium Altitude)



**KOPI LIBERICA /
EXCELSA > Untuk
Dataran rendah,
bergambut
(Liberica /Excelsa
Coffee > Low land,
"Peat moss" land,
etc.)**

Citarasa Khas : Dried chery Aroma, Green, Grassy, Herbal, Very Sweet Taste.

Specific Caharcters > Dried chery Aroma, Green, Grassy, Herbal, Very Sweet Taste



Kopi-Kopi Liberoid –Jambi

(Jambi Liberoic's Coffee)



Pertanaman (*Plant*)



Buah Kopi Liberica (*Cherry*)



PULPER (*Pulper*)



Hasil Pulper (*Parchment*)



Dataran Tinggi : Aroma Tajam, Flavor Kuat, Acidity Kuat, Mild
(High Land : Excellent Fragrance, Aroma And Flavors, Good Acidity, Mild)



Dataran Rendah : Aroma Dan Flavor Datar, Acidity Tidak Ada / Lemah, Sangat Pahit Dan Sepat, Body Kuat

(Low Land : Flat Fragrance / Aroma / Flavor, Very Bitter, Astringent, Heavy Body)



Persiapan Panen (*Harvesting*)



Kondisi Buah Kopi Sa'at
Dipetik. Warna Buah :
Maksimum Merah ,
Minimum Kuning ,
Jangan sampai masih
hijau atau kelewat
hitam



Sarapan Dulu Biar Kuat *(Picking Preparation)*



PANEN : Kondisi Buah Kopi Sa'at Dipetik. Warna Buah : Maksimum Merah, Minimum Kuning , Jangan dipetik yang masih hijau, petik dan pisahkan yang hitam

HARVEST ING : *Coffee chery conditions when Picked, color: Maximum Red, Minimum Yellow. Do not pick the green chery, pick and separate the black chery.*

Petik Buah Selektif Yang Merah (*Selective Picking*)





HARVESTING



BUAH KOPI MASIH MUDA



Buah masih muda. Warna buah Hijau : Jika terpetik maka : Warna Fisik Biji yang akan dihasilkan Hitam – Putih pucat. Aroma, Flavor, acidity, dan Body Lemah. Cacat Rasa : Grassy, bitterness, astringency sangat tinggi.

The cherry is still young. Green cherry color. Coffee beans : Color Physical beans that will be generated Black - White pale. Aroma, Flavor, acidity, and Body Weak. Defects Taste: Grassy, bitterness, high astringency

TIDAK BOLEH DIPETIK !!! (Must be not picked)

BUAH KOPI SUDAH MULAI TUA DAN MULAI MASAK



Buah kuning / sebagian besar masih hijau-kekuningan. Warna Buah : Hijau - kekuningan: Warna Fisik Biji : keabu-abuan sampai hijau pucat. Aroma, Flavor, acidity, dan Body Lemah. Cacat Rasa : Grassy, bitterness, astringency tinggi.

Yellow fruit / most-yellowish green. Cherry color: green - yellow: Physical bean : greyish to pale green. Aroma, Flavor, acidity, and thin Body. Defects Taste: Grassy, bitterness, high astringency

BUAH KOPI SEBAGIAN BESAR SUDAH TUA DAN MASAK



- **Buah yang merah kekuningan dan sebagian besar berwarna merah. Fisik buah : Kuning-kemerahan segar dan sehat. Harapannya : Fisik biji keabu-abuan, Aroma dan citarasa bagus, Acidity seimbang. Body mantap, Bitterness sedang. Astringent sedang, Cacat citarasa tidak ada.**
- ***Yellowish red cherry and mostly red. Physical cherry: Yellow-red fresh and healthy. The hope: Physical beans grayish, Aroma and taste good, Acidity balanced. Body***

BUAH KOPI SUDAH TUA DAN MASAK OPTIMUM



Buah yang merah penuh. Pemetikan yang paling tepat pada kondisi ini. Fisik buah : Merah segar dan sehat. Harapannya : Fisik biji keabu-abuan. Aroma dan citarasa bagus, Acidity seimbang, Body mantap, Bitterness sedang, Astringent sedang, Cacat citarasa tidak ada.

Full red of coffee cherry. Picking the most appropriate under these conditions. Physical fruit: Red, fresh and healthy. The hope: Physical beans grayish. Aroma and taste good, balanced Acidity. Body steady, medium Bitterness. Astringent medium, flavor defect

BUAH KOPI SUDAH MELEWATI MASAK OPTIMUM



Buah kelewat masak dan sebagian sudah kering di pohon. Buah kelewat masak dan hitam. Warna Fisik Biji hitam sebagian sampai coklat. Aroma, Flavor, acidity, dan Body Sedang. Cacat Rasa : Earthy, Moldy, dan Stink.

Over-ripe cherry and some already dry on the tree. Coffee cherry too ripe and black color. Coffee beans : partial black to brown. Flavor profile : Medium on the Aroma, Flavor, acidity, and Body. Defect : Earthy, Moldy, and Stink.

KELEWAT MASAK (*OVERIPE CHERRY*)

Suasana Dan Cara Panen (*Harvesting Conditions*)



Kini



PENGANGKUTAN

Doeloe

Transportation

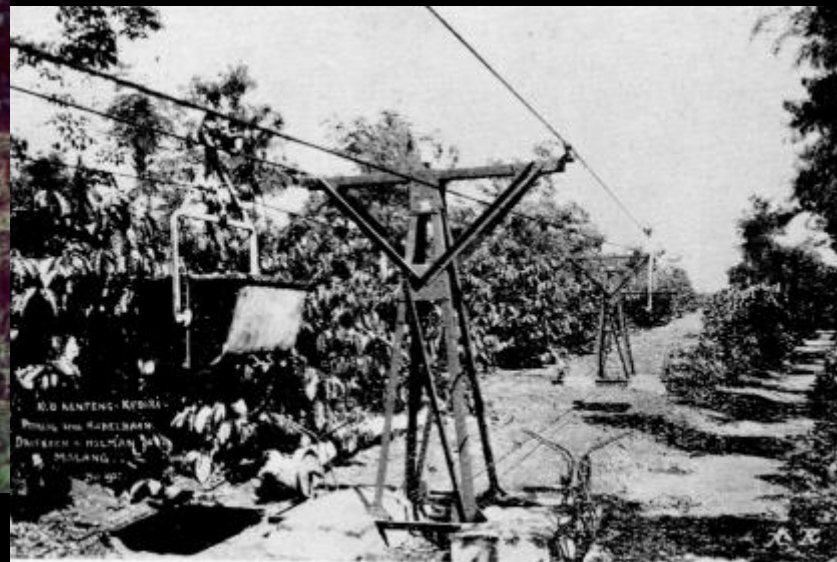


Hasil Pemetikan :
Harus segera diangkut ke Pabrik. Untuk
Menghindari Pembusukan buah *Stinker*
/ *Fermented*.

Picking Results:
*Should be immediately transported to the
factory. To avoid : rotting on che cherry,
developing on stinker / Fermented defects.*



Super Women





Penimbangan (*Weighing*)



Pemisahan buah hijau (*Cherry Classification*)



Pemeriksaan (*Controlling*)



SORTASI MANUAL. Buah hijau dan hitam dipisah. Benda asing dan kotoran dibuang.

Manual sorting. Green and black fruit are separated. Foreign objects and filth are removed.

Sortasi Buah Kopi (*Cherry Classification*)



ALHAMDULILLAH PANEN KOPI BANYAK !!!!



OLAH BASAH – GILING KERING
FULL WASH -DRY HULLING
(WIB = West Indische Bereiding)

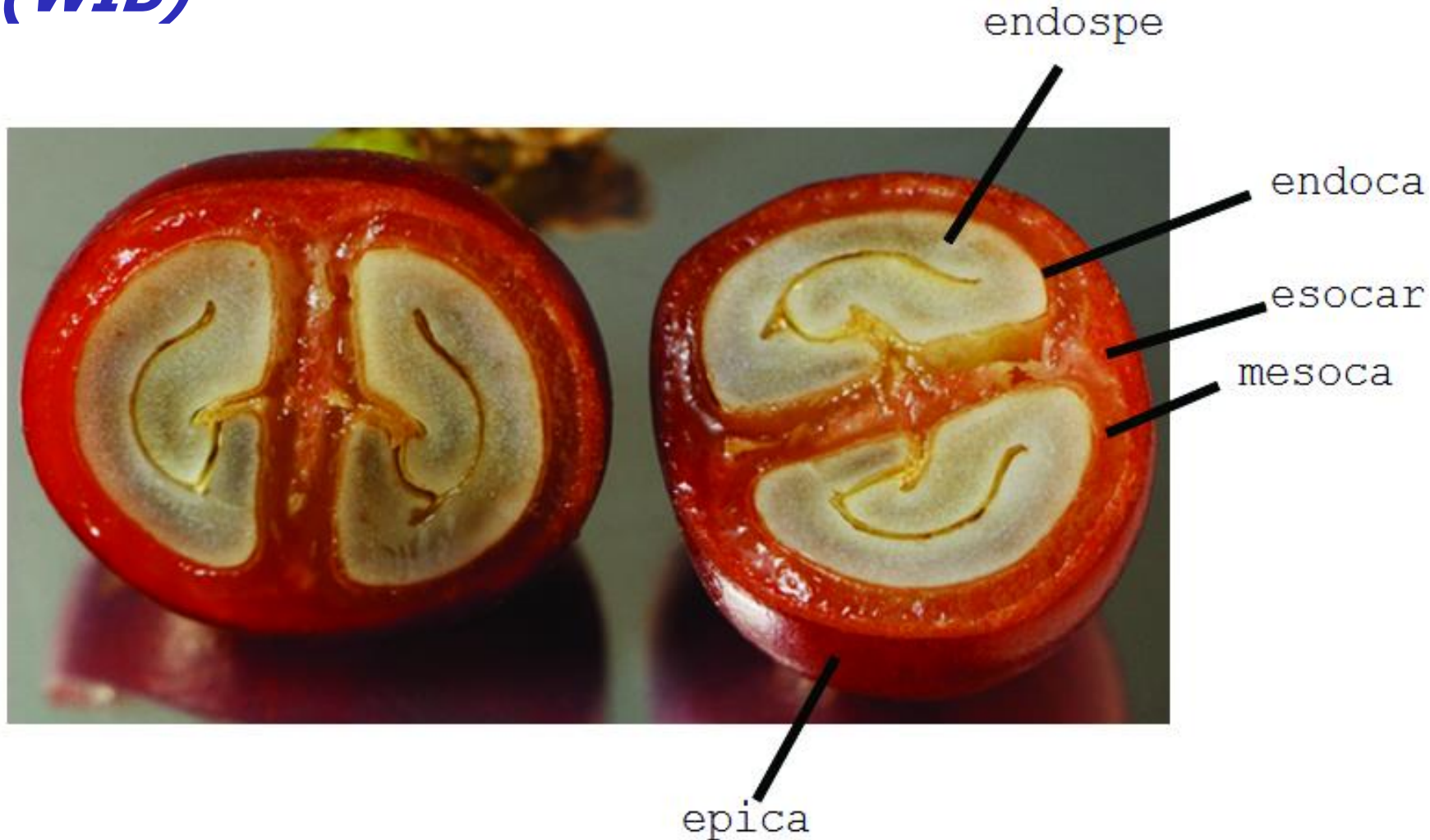
Sortasi buah kopi > Pengupasan buah kopi > Fermentasi (1 – 2 hari) > Penjemuran atau pengeringan mesin Kopi HS basah sampai dengan kadar air kurang dari 12 % > Penggilingan (Huller) > Sortasi / Grading > Pengemasan

Sorting coffee cherries > Pulping the coffee cherry> Fermentation (1-2 days) > SunDrying or mechanical drying of the wet parchment up to the moisture content of less than 12% > Hulling the parchment > Sorting / Grading > Packaging

FULL WASH DRY HULLING

PENGOLAHAN CARA BASAH

(WIB)



Wah-wah, ketat !!!



Ini masih ada yang hijau
Besok jangan lagi !



Sortasi Dengan Air : Pemilahan Berdasarkan Berat Jenis

*Sorting With Water :
Sorting Based On the Density*

- **TENGCELAM** :Warna Buah : **MERAH – KUNING** / Warna Fisik Biji : **Kebiruan** / Aroma Dan Flavor : **Bagus** / **Tingkat Acidity : Baik** / **Pahit- Sepat- Body : Seimbang**
- **TERAPUNG** : Warna buah hitam – merah kehitaman / Warna Fisik Biji : hitam sebagian – coklat / **Aroma, Flavor, acidity, dan Body kurang** / **Cacat Rasa : Earthy, Moldy, dan Stink**
- **SINK**: Cherry Color: **RED - YELLOW** / Coffee beans color: **Bluish** / Aroma and Flavor: **Good** / Level of Acidity: **Good** / Bitterness-Sastringency-Body: **Balanced**
- **FLOATING**: Cherry Color : **black - dark red** / Coffee beans Color: **black majority - brown** / Lack of : **Aroma, Flavor, acidity, and Body** / Defects : **Earthy, Moldy, and Stink**



Perambangan Di Tempat Pengolahan (*Floatation*)



Buah Kopi Tertunda Pengupasan Buah (*Pulper*)

Condition Of Coffee Cherry : Delayed Pulping Process



Kopi Hs Dari Buah Segar
(Parchment Of Fresh Cherry)



Kopi Hs Dari Buah Tertunda 4 -7 Hari
(Parchment Of Not-fresh Cherry)





- **PENGUPASAN KULIT BUAH (PULPING)**
- Tujuan :
- Mengurangi beban pengeringan dan hulling
- Memperbaiki mutu fisik biji kering, dan citarasa seduhan
- **Purposes:**
- **Reducing the burden of drying and hulling**
- **Improve the physical quality of dry beans, and the flavors**

Air Bersih Untuk Pulper (*Clean Water for Pulper*)





Mesin Pulper
(***Puping Mechine***)



Efico-100

Pulper 3 Silinder (3 Drums Pulper)



PULPING



Pulper Tradisional (*Traditional Pulper*)





Hewan Luwak
Civet Cat (Paradoxorus hermaphroditus)



KOPI LUWAK (*Luwak Coffee*)



LUWAK GREEN BEANS



LUWAK ROSTED BEANS



LUWAK "WASHED"



LUWAK ORIGINAL CLUSTER



**KOPI LUWAK ANDUNGSARI
(ANDUNGSARI LUWAK COFFEE)**
Product Number : /LWK/AS-ICCRI/2007



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Pulper Yang Kurang Sempurna (*The pulper Less Perfect*)



HASIL PULPER (*Parchment*)

Jika hasil proses Pulper masih kurang baik maka :

- Kopi HS basah / Biji berkulit tanduk basah dibersihkan dari sisa kulit buah.
- Kulit buah diayak agar biji yang terikut dapat diselamatkan
- *If the pulping result is still not good, then:*
- *Wet Coffee parchment / wet pulped beans may be cleaned of residual pieces pulp.*
- *The pulp mass can be sifted in order to save the entrained coffee beans/ parchments.*

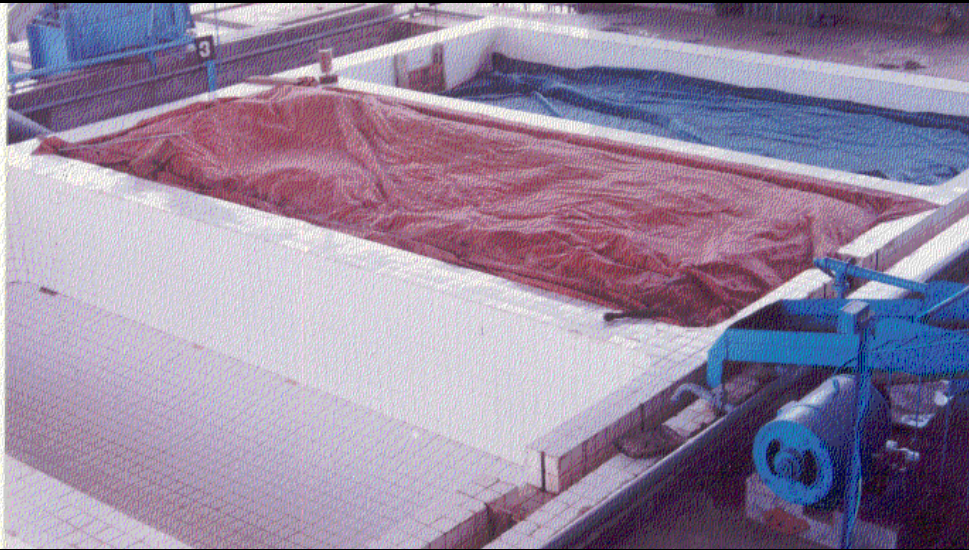


Pembuangan sisa kulit buah (*Cleaning*)



**Pengayakan Kulit Buah
(*Sieving*)**

Fermentasi Arabika 1 – 2 malam (*Arabica Fermentation, 1 – 2 night*)



Fermentasi (*Fermentation*)

Fermentasi

Tujuan Mengurangi dan memudahkan pencucian lendir biji, dan memperbaiki citarasa.

Untuk kopi arabika sebaiknya dilakukan fermentasi selama 12 hingga 36 jam dengan pembilasan setiap 12 jam. Robusta tidak perlu fermentasi.

Fermentation

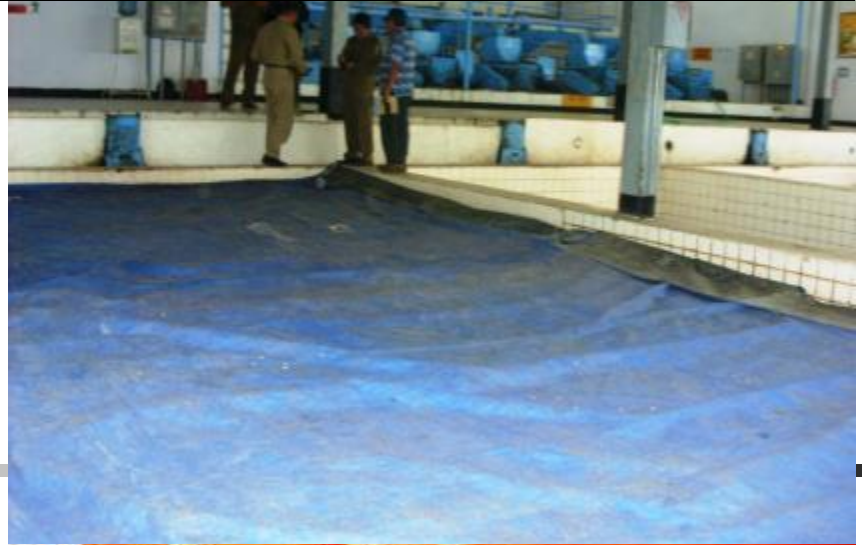
Reduce objectives and facilitate washing beans mucilage, and improve flavor.

For Arabica coffee should be fermented for 12 to 36 hours by flushing every 12 hours.

Robusta not need fermentation.

FERMENTASI KOPI PARCHMENT (HS)

Coffee Parchment Fermentation (HS)





- **Pencucian dan Perambangan**
- Tujuan :
membersihkan biji bagus dari lendir, sisa fermentasi, dan memisahkan biji yang terapung. Biji terapung diolah terpisah.
- Biji digosok-gosok sampai kesat / tidak terasa licin.
- ***Washing And Flotation***
- ***Objective: good coffee parchment cleaning of the mucous, residual fermentation, and separate the floating parchment. The Floating parchment should be processed separately.***
- ***The parchment rubbed against until rough / does not feel slippery.***





Pengolahan Limbah Cair : Sedimentasi Dan Pengapungan, Aerasi, Atau Untuk Penyiraman Tanaman, Atau Untuk Biogas
(Waste Water Treatment And Utilization : Sedimentation and Flotation, Aeration, Or For Watering Plants, Or To Biogas)



Limbah Kulit Kopi **(Coffee Pulp Composting)**



Mulai Membusuk
(Composting Process)



Kulit Kopi Segar
(Fresh Pulp)



Terdekomposisi
(Compost)

Pembuangan kulit kopi segar di bawah pohon kopi. Sebaiknya dihindari.
Disposal of fresh coffee pulp under the coffee plant. Should be avoided.





Stop ! Pembakaran Limbah Padat Kopi
(Stop Combustion of coffee hull)

PENJEMURAN : Robusta & Arabika
Kopi Berkulit Tanduk : Lantai Semen
Terpal Plastik, Para-para
(Sun DRYING : Robusta & Arabica
Coffee crusted Horn: Cement floors
Plastic tarps, Drying Table)





Pengeringan Dengan
Efek Rumah Kaca (**Solar Dryer**)



HARUS HIGIENIS !!! *(Should be hygienically!!!)*



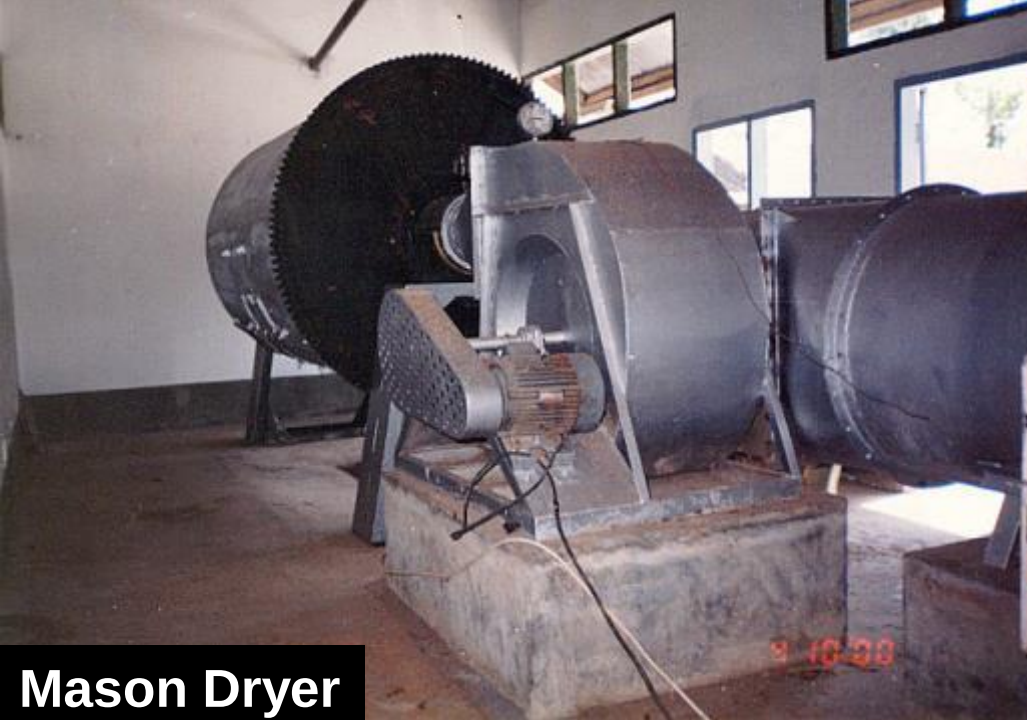
HARUS HIGIENIS !!! *(Should be hygienically !!!)*



SORTASI SELAMA PENGERINGAN (*Cleaning During Sun-drying*)

Penjemuran Yang Bagus Kopi Berkulit Tanduk (*Very Good Sun-drying Of Coffee Parchment*)



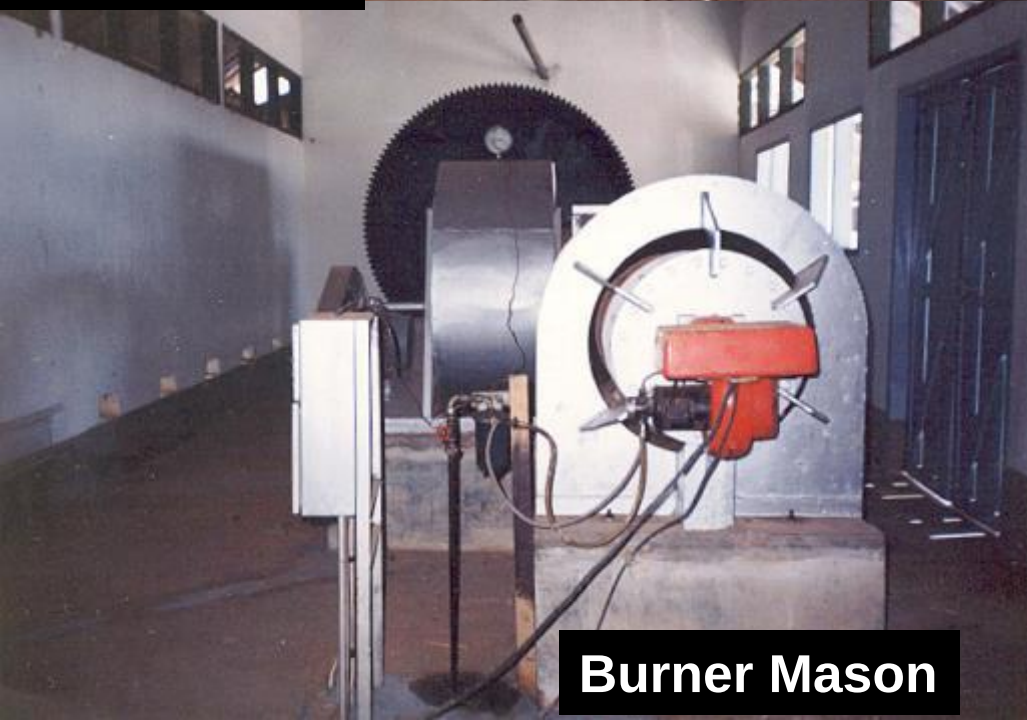


Mason Dryer



**Pengeringan Mekanis
Dengan Panas Pembakaran Atau
Kombinasi Mekanis-Penjemuran**
***Mechanical Dryer : With the heat Burning Or
Mechanical-Sun Combination Drying***

- ❑ Jenis : Mason / Guardiola, *VIS Dryer*
- ❑ Pengering Kombinasi Energi Surya
- ❑ Keuntungannya adalah : panas dapat diatur, efisiensi pemanasan tinggi, waktu pengeringan pendek, kebutuhan lahan dan tenaga kerja kecil, tidak terlalu tergantung cuaca
- ❑ Kontrol ketat : Suhu, Pembalikan, dan Kadar air.
- *Type: Mason / Guardiola, VIS Dryer*
- *Combination dryer Solar Energy*
- *The advantage are : the heat can be arranged, high heating efficiency, short drying time, labor and land requirements are smaller, not too depending on the weather*
- *Strict control: Temperature, turnabout, and the coffee moisture content.*



Burner Mason

PULP NATURAL PROCESS

Sortasi buah kopi

Pengupasan buah kopi

Penjemuran Kopi HS basah sampai dengan kadar air 12 %

Penggilingan (Huller)

Sortasi / Grading

Pengemasan

Sorting coffee cherry

Pulping of the coffee cherry

Coffee parchment drying up to a moisture content of 12%

Milling (huller)

Sorting / grading

Packaging

PULP NATURAL, Kulit Tanduk Lengket





**Kopi Dipulper, Difermentasi, Dicuci
Dan Dijemur**
(Full Washed Coffee Parchment)



Kopi Dipulper Langsung Dijemur
(Pulp Natural Coffee Parchment)





HARUS HIGIENIS !!! *(Should Be Hygienically!!!)*

OLAH BASAH – GILING BASAH

FULL WASH WET HULLING

(Sumatran Processing)

Sortasi buah kopi > Pengupasan buah kopi > Fermentasi (1 – 2 hari) > Penjemuran Kopi HS basah sampai kulit tanduk kering (2 – 6 jam) > Penggilingan (Huller) > Penjemuran kopi Labu sampai dengan kadar air kurang dari 12 % > Sortasi / Grading > Pengemasan

Sorting coffee cherries > Pulping the coffee cherry> Fermentation (1-2 days) > SunDrying of the wet coffee parchment until the parchment was dried (2-6 hours) > Hulling the parchment > Drying the "Labu" up to the moisture content of less than 12% > Sorting / Grading > Packaging



PENGERINGAN KOPI GABAH SATU HARI *(Drying of Wet Parchment)*

Full Washed Wet Hulling
(Semi Wet Process)



HULLER KOPI GABAH KERING ANGIN



Kopi Gabah *(Wet Parchment)*



TANDA SIAP HULLER



Kopi Labu
(Wet Coffee Beans)



Kopi Labu *(Wet Coffee Beans)*



CACAT KUKU KAMBING



Kopi beras kering *(Dry Coffee Beans)*

PENJEMURAN KOPI LABU
(Sun Drying of Kopi Labu)

GILING BASAH (***WET HULLING***)





Pengeringan Kopi Labu
(*Drying Labu Coffee*)

SORTASI (*GRADING*)



DP, *Dry Process* atau OIB, *Oost Indische Bereiding* atau *Unwashed Coffee*

Tahapan :

Panen > Buah kopi (*Cherry*) > Pecah Kulit / Tanpa Pecah Kulit >

Penjemuran > Penggilingan (*Huller*) > Sortasi/Grading > Pengemasan

(DP, Dry Process or OIB, Oost Indische Bereiding or, unwashed Coffee.

Phases:

Harvesting > Coffee cherry > Splitted chery / whole coffee cherry >

Drying > Milling (Huller) > sorting / Grading > Packaging)

BUAH KOPI LANGSUNG DIJEMUR (*Coffee Cherry Directly "Sun-dried"*)



PENGOLAHAN KERING

Kopi gelondong atau
pecah kulit dijemur
langsung

*(Dry Process Drying
whole coffee cherry)*



Pecah Kulit
(*Splitted
chery*)





HARUS HIGIENIS !!! *(Should Be Hygienically!!!)*

Pengolahan Kopi Cara Kering (Kopi Di Pecah Kulit Sebelum Dijemur) *(Sundrying of Splitted Cherry)*



Kopi DiPecah Kulit Sebelum Dijemur



HINDARI SERANGAN JAMUR

(Protect from Mold Growth)





Kontrol Dengan Ketat

- Suhu Pengeringan:
- Robusta boleh $> 70^{\circ}\text{C}$
Arabika $< 70^{\circ}\text{C}$
- Pembalikan: harus sering dibalik pada awal pengeringan
- Kadar air : $< 12\%$

(Quality Control)



PENGUPASAN KULIT KERING (HULLING)

Tujuan : memisahkan
Kulit buah kering untuk Proses kering,
Memisahkan Kulit tanduk untuk proses basah. Alat :
Huller khusus kopi, atau kadang-kadang hasil modifikasi
huller padi

Goal: removes
Dried husk of dry process,
Removes parchment of wet process. Tools: Special
Huller for coffee, or sometimes modified rice huller



SORTASI (***Grading***)

Sortasi Mesin (***Sorting Machines***) :
Ukuran / Size (***Katador***)
Warna / Color (***Sortex***)

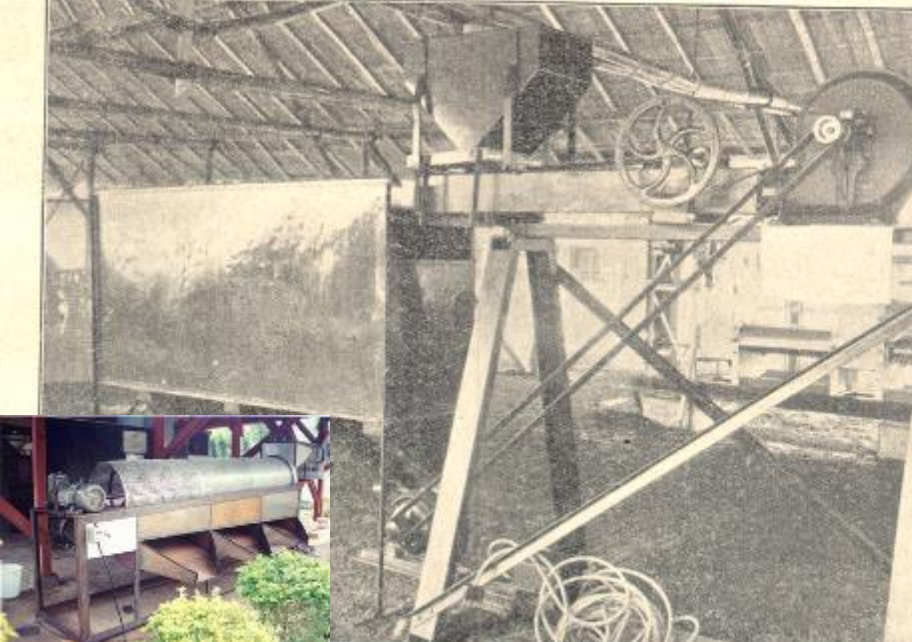
**Sortasi Manual Dengan Meja Untuk
Warna, Bentuk, Pecah, Lubang, Kontaminan
Fisik, Sisa Kulit Dll**

***Manual sorting with tables for color, shape,
broke, holes, physical contaminants,
remaining husk/parchment, etc.***

Grading dan klasifikasi biasanya didasarkan pada beberapa kriteria berikut

(Grading and classification is usually based on some of the following criteria):

- ❑ Ketinggian dan / atau wilayah;
- ❑ Varietas botani;
- ❑ Pengolahan (Pengolahan basah / kering, dicuci atau alami);
- ❑ Ukuran biji (ukuran ayakan), kadang-kadang juga bentuk dan warna biji;
- ❑ Jumlah cacat (ketidaksempurnaan);
- ❑ Penampilan sangrai dan Citarasa (flavour, karakteristik, kebersihan, dll);
- ❑ Densitas Biji.
- ❑ Altitude and/or region;
- ❑ *Botanical variety;*
- ❑ *Preparation (wet or dry process = washed or natural);*
- ❑ *Bean size (screen size), sometimes also bean shape and colour;*
- ❑ *Number of defects (imperfections);*
- ❑ *Roast appearance and cup quality (flavour, characteristics, cleanliness, etc.);*
- ❑ *Density of the beans.*



Sortasi Kopi Beras Kering



**Sortasi Mesin : Ukuran (*Katador*),
Warna (*Sortex*), Densitas (*Density*)**



**Sortasi Manual : warna dan
cacat lainnya**



Sortasi Manual

Dengan Meja Untuk Warna, Bentuk, Pecah, Lubang, Kontaminan Fisik, Sisa Kulit DII

(Manual Grading)



UJI CITARASA KOPI

(COFFEE CUPPING)

Ada Berapa Karakteristik Citarasa Biji Kopi ?

(How To Describe Characteristic Flavors Of Coffee?)



Berapa Wajah Yang Anda Lihat?

PENYANGRAIAN SKALA LABORATORIUM

(LABORATORY SCALE ROASTING)



PANELIS



Tastes

- Sour
 - Winy
 - Tart
 - Hard
 - Acrid
- Sweet
 - Melony
 - Mild
 - Nippy
 - Piquant
 - Tangy
- Bitter
 - Harsh
 - Astringent
 - Rough
 - Neutral
 - Soft
 - Delicate
- Salty
 - Briny
 - Umami

Aromas

- Enzymatic
 - Fruity
 - Citrus
 - Berry-like
 - Alliacious
 - Leguminous
 - Nut-like
 - Malt-like
 - Candy-like
 - Syrup-like
 - Chocolate-like
 - Vanilla-like
 - Turpenny
 - Medicinal
 - Warming
 - Spicy
 - Carbony
 - Ashy
 - Smoky
 - Pungent
 - Tarry
 - Pipe tobacco
 - Burnt
 - Charred
- Dry Distillation
 - Caramel
 - Creamy
 - Malty
 - Nutty

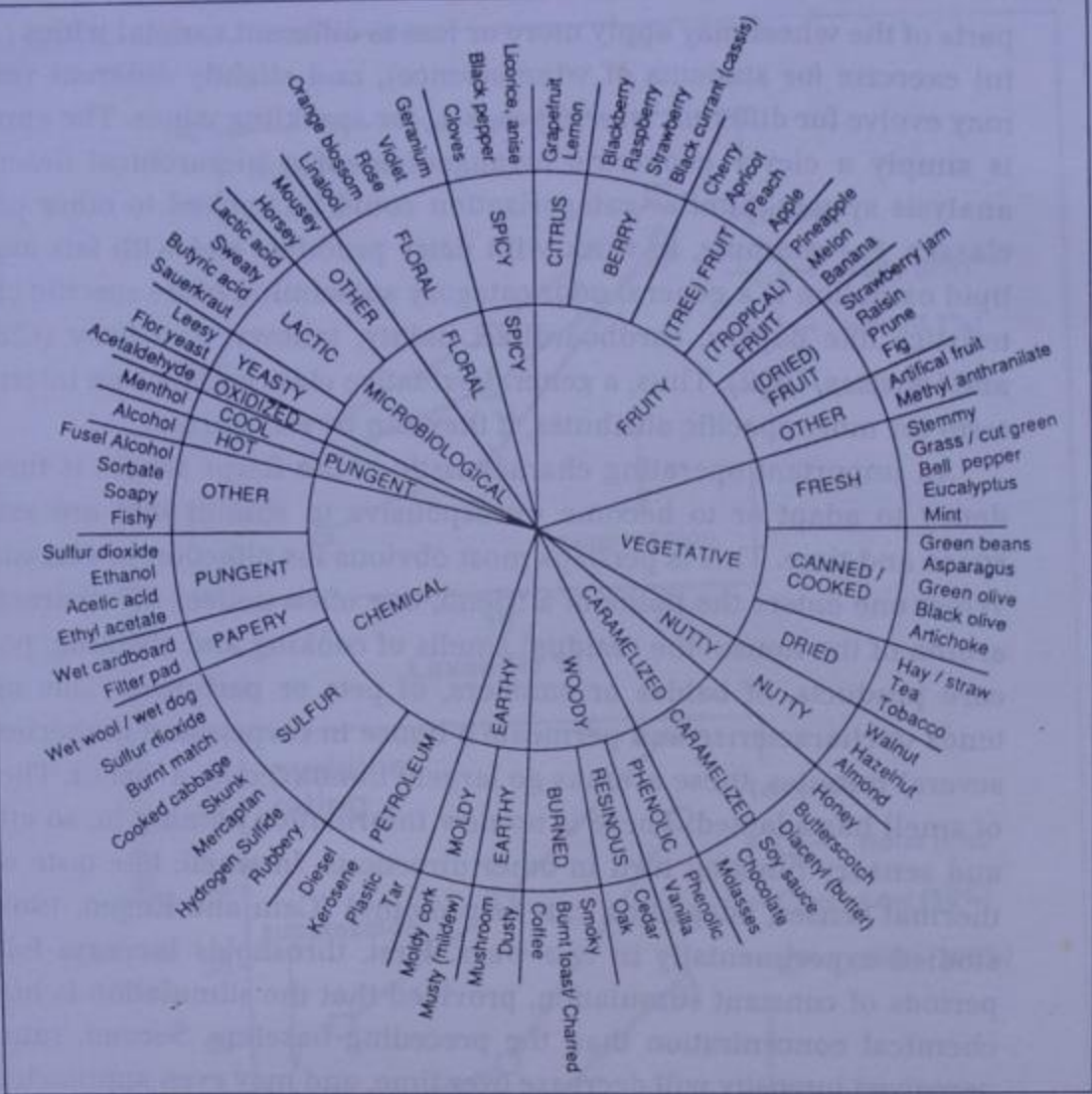
The diagram is a circular chart titled "Taste and Smell" at the top. It is divided into four main quadrants, each with a central label and two concentric rings of sub-labels.

- Top-Left Quadrant (Yellow/Gold):**
 - Central Label: **External Changes**
 - Inner Ring: **Fats Absorbing Odors**
 - Outer Ring (clockwise from top): Fresh Earth, Wet Soil, Humus, Mushroom, Raw Potato, Earthy, Groundy, Dirty, Musty, Moldy, Buggy, Fatty, Mineral Oil, Cereal-like, Biscuity, Starchy, Cooked, Baked, Flat, Dull.
- Top-Right Quadrant (Green):**
 - Central Label: **Internal Changes**
 - Inner Ring: **Fats Changing Chemically**
 - Outer Ring (clockwise from top): Butyric Acid, Soapy, Lactic, Talloxy, Leather-like, Wet wool, Harsh, Cooked Bean, Gamey, Coffee Pulp, Acerbic, Leesy, Iodine, Carbolic, Acidic, Butyl Phenol, Kerosene, Ethanol, Green, Hay, Starchy, Woody, Elder Pith, Wet Cardboard, Wet Paper, Smoky, Rancid, Fat.
- Bottom-Left Quadrant (Orange/Brown):**
 - Central Label: **Loss of Organic Material**
 - Inner Ring: **Improper Roasting**
 - Outer Ring (clockwise from top): Tipped, Scorch, Baked, Flat, Dull, Buggy, Fatty, Mineral Oil, Cereal-like, Biscuity, Starchy, Cooked, Baked, Flat, Dull.
- Bottom-Right Quadrant (Blue/Purple):**
 - Central Label: **Acids Changing Chemically**
 - Inner Ring: **Ribby**
 - Outer Ring (clockwise from top): Fermented, Rancid, Carbolic, Acidic, Butyl Phenol, Kerosene, Ethanol, Green, Hay, Starchy, Woody, Elder Pith, Wet Cardboard, Wet Paper, Smoky, Rancid, Fat.

Taints & Faults

Standar Metode Pengujian Citarasa (*Standard of Cupping method*)

FLAVOR WHEEL



2.10
figure

The wine aroma "wheel," a system for arranging common wine aroma characteristics in a three-tiered categorical system. Inner terms are more comprehensive; the outer terms are more specific. Reference materials for the outer terms are given in the original paper, (from Noble et al., 1987, copyright 1987 by the American Society for Enology and Viticulture). The wine aroma wheel is reproduced by agreement with the American Society for Enology and Viticulture, a nonprofit corporation. All rights reserved. The society does not endorse any particular wine, winery, product, or commercial enterprise.

ODOR CATEGORY SYSTEM

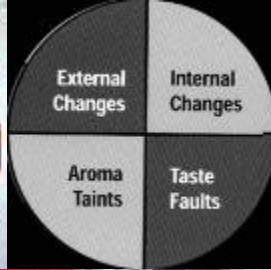
2.3 Table

Odor Category Systems

Functional Odor Categories ¹	Factor Analysis Groups ²
Spicy	Spicy
Sweet (vanilla, maltol)	Brown (vanilla, molasses)
Fruity (noncitrus)	Fruity, noncitrus
Citrus	Citrus
Woody, nutty	Woody
	Nutty
Green	Green
Floral	Floral
Minty	Cool, minty
Herbal, camphoraceous	Caraway, anise
Other	Animal
	Solvent
	Burnt
	Sulfidic
	Rubber

¹ Descriptive attributes derived via principles of nonoverlap, applicability, and completeness.

² Factors analysis groups derived from ratings of aroma compounds on 146-item descriptor list.

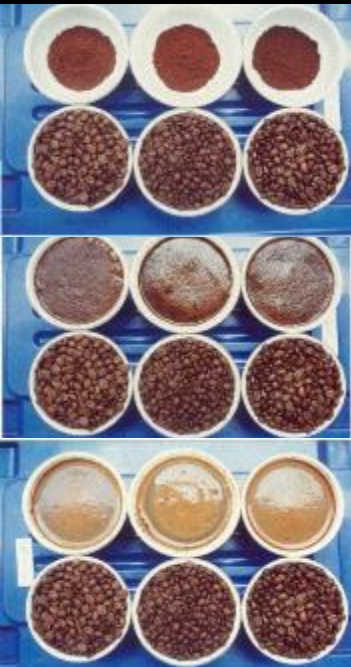


Bismillah



PENGUJIAN CITARASA SEBELUM KOPI DIKEMAS :

Oleh : Penentu Kebijakan, Panelis ahli, dan Wakil Konsumen dengan tujuan : Menentukan jenis mutu dan kelayakannya untuk dipasarkan. Menentukan perlakuan perbaikan, jika ada masalah produksi



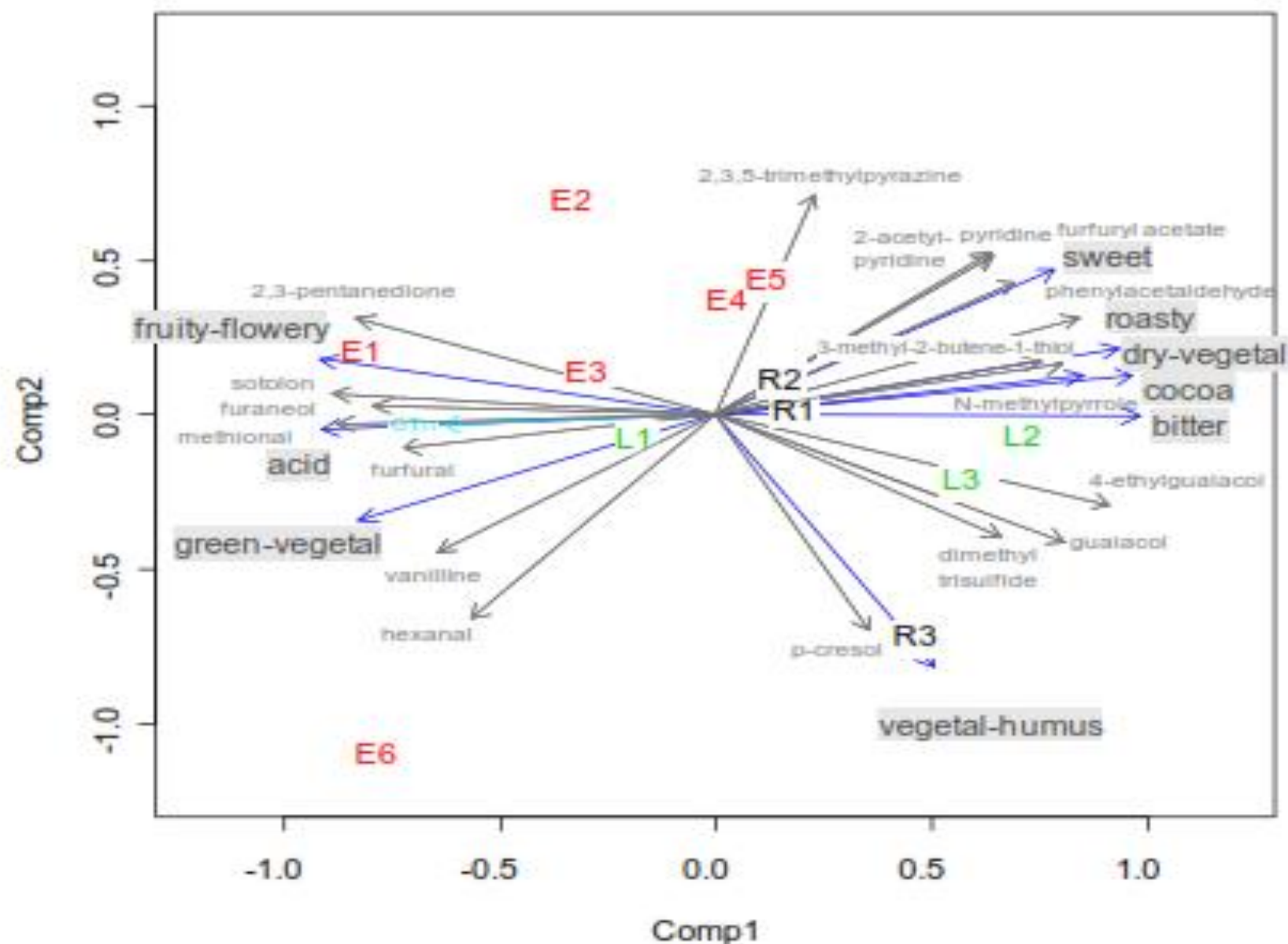


Figure 1. PCA plot based on sensory data after subtraction of intensity, and projections of flavor compounds. The longer an arrow is, the better it is represented on the PCA plot.

CONTOH HASIL ANALISIS CITARASA BEBERAPA JENIS KOPI (Coffee Sensory Quality in the Industry)

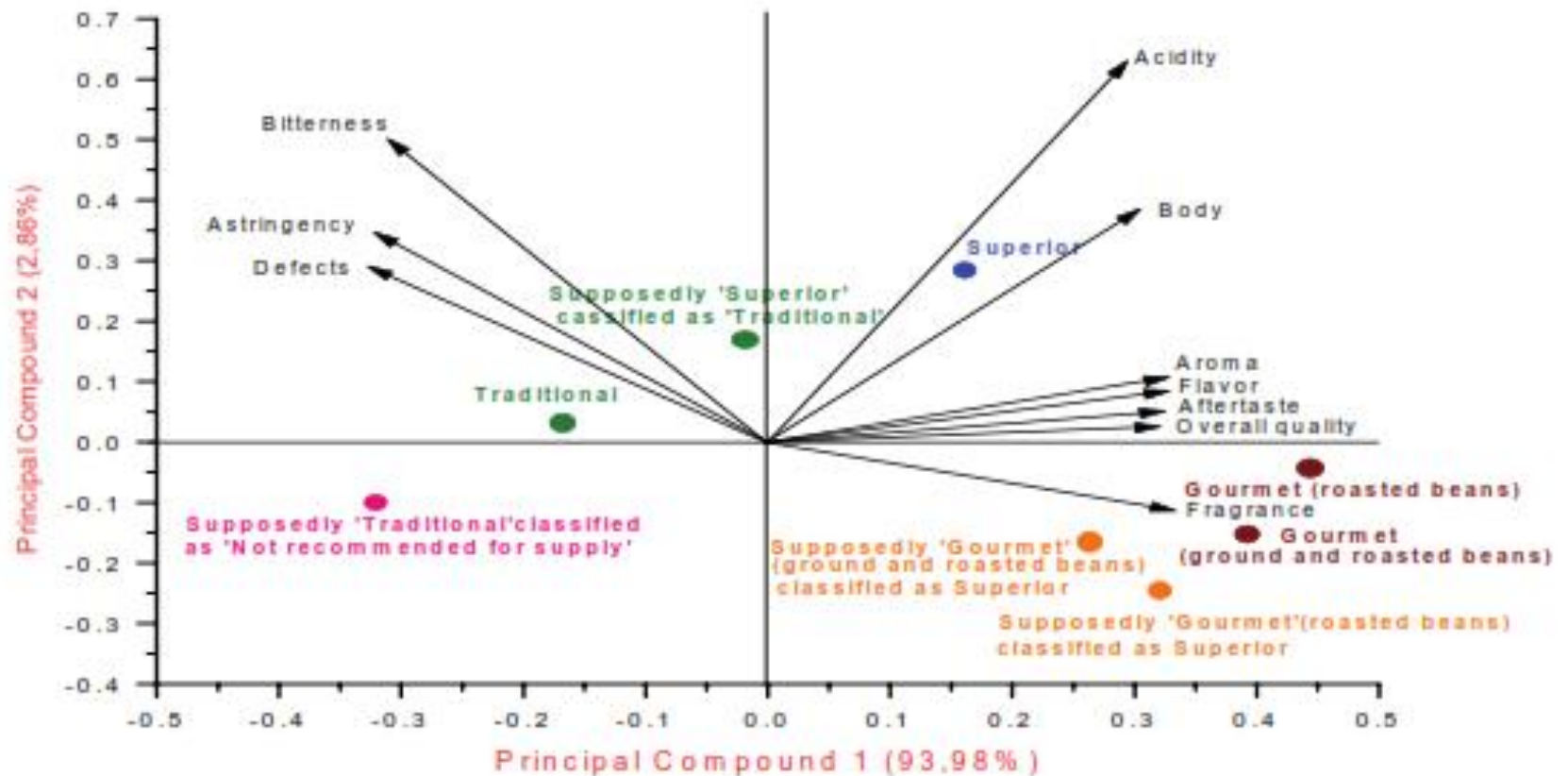


Figure 2. Configuration of the coffee samples obtained by the technique of Principal Components Analysis - ACP.

CONTOH HASIL ANALISIS CITARASA BEBERAPA JENIS KOPI (*Coffee Sensory Quality in the Industry*)

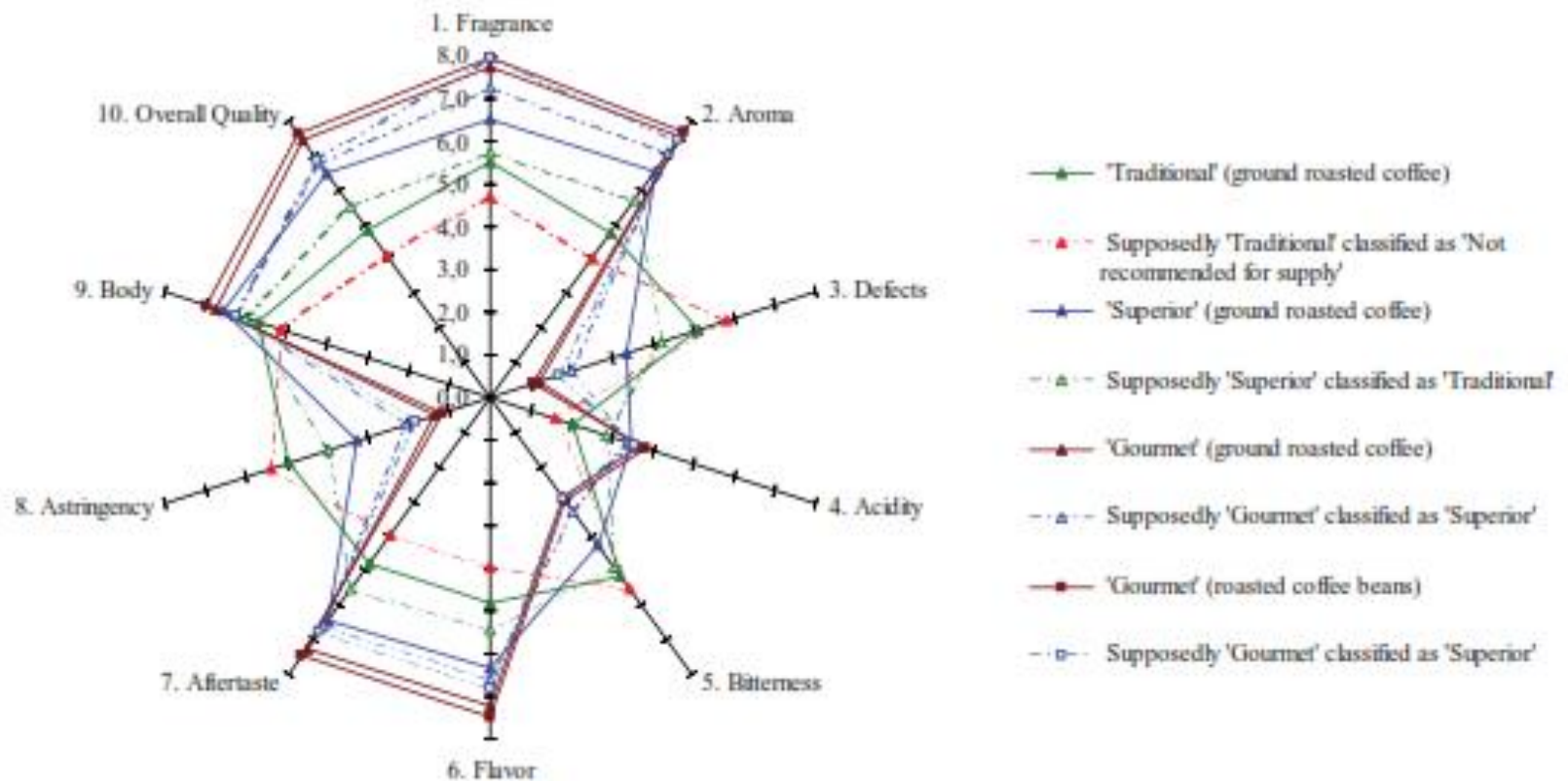
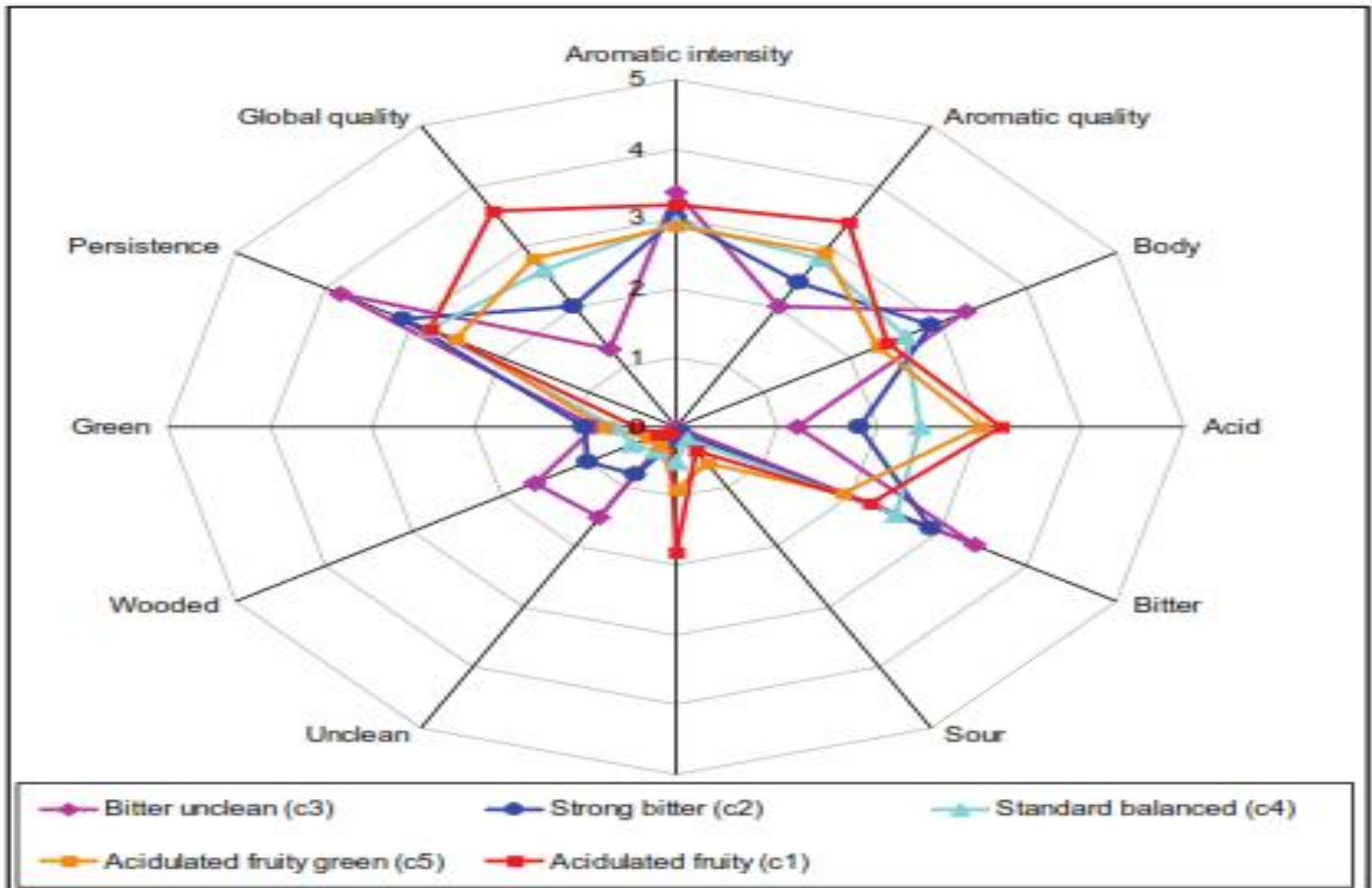


Figure 1. Mean sensorial profile of the coffee samples classified as 'Gourmet', 'Superior', 'Traditional' and 'Not recommended for supply'.

Average Profiles Of Sensory Groups.

Using ANOVA (variance analysis), it is possible to see which sensory descriptors account for the significant differences between the groups.

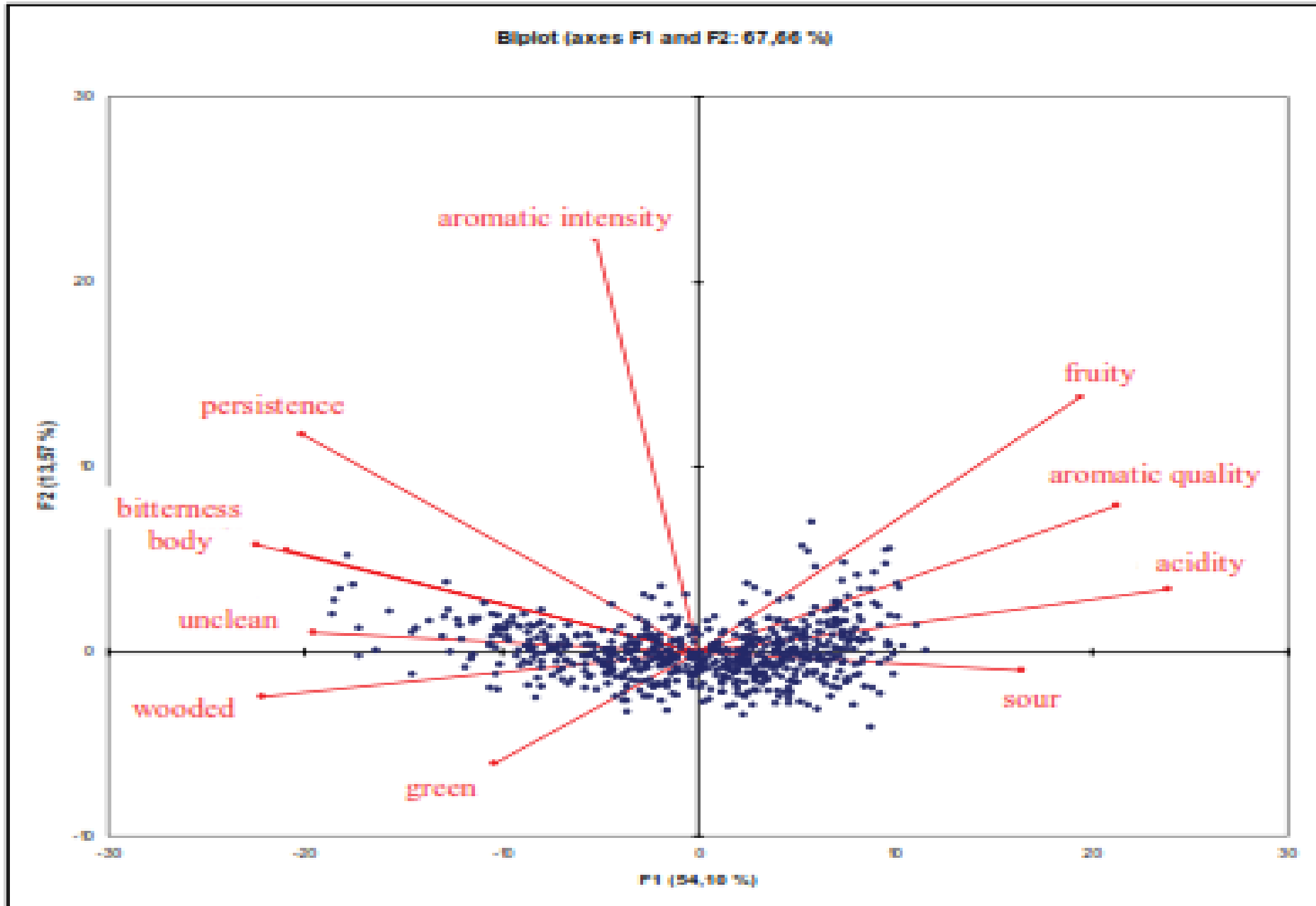


Correlation between Coffee Flavor attributes

Variables	AI	AQ	AC	AS	BI	BO	FL	OVS	Above screen 14
AQ	0.840*								
AC	0.504*	0.530*							
AS	-0.240	-0.114	-0.198						
BI	-0.482*	-0.362*	-0.588*	0.594*					
BO	-0.149	0.010	-0.297*	0.487*	0.615*				
FL	0.507*	0.613*	0.694*	-0.128	-0.42*	0.101			
OVS	0.666*	0.746*	0.776*	-0.176	-0.522*	-0.047	0.862*		
Above screen 14	0.140	0.157	0.176	-0.013	-0.08	-0.049	0.110	0.190	
Bean density	0.060	0.091	0.069	0.075	0.023	0.186	0.186	0.033	0.080

**Significant at 0.05 probability level; AI=Aromatic intensity, AQ=Aromatic quality, AC=Acidity, AS=Astringency, BI=Bitterness, BO=Body, FL=Flavor, OVS=Overall standard*

With PCA (Principal Component Analysis) it is possible to visualise the distribution of the sensory profiles of different coffees.



Cuptest Itu Penting *(The Importance Of Cupping)*

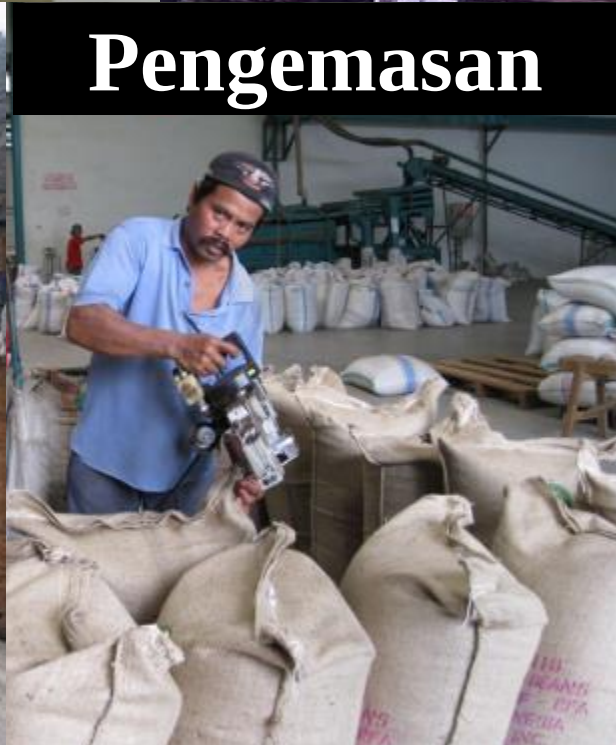


PENGEMASAN (*PACKAGING*)

- Biji Kopi : Cukup kering, seragam *mutunya* (*Coffee Beans: Quite dry, uniform quality*)
- Pengemas : bebas kontaminasi, baru, bahan aman kesehatan manusia, kuat, rapat, bersih, menarik, mudah dikenali (desa-daerah-negara asal, jenis/klon/varietas, cara olah, tanggal panen/olah, jenis mutu, ukuran biji) seragam ukurannya (*Packaging: free of contamination, a new, safer materials to human health, strong, whole, clean, attractive, easily recognizable (rural-area of origin, type / clone / variety, processing, date of harvest / though, the type of quality, grain size) uniformly size*)



PENGEMASAN ***(PACKAGING)***



Pengemasan



Penggudangan (*Store House*)



PENYIMPANAN dan PENGUDANGAN (*STORAGE*)



Biji Kopi : Cukup kering, seragam Mutunya
Gudang : bebas kontaminasi, aman, cukup besar, berventilasi, kuat, tidak bocor, bersih, menarik, tertata, harus bebas dari kontaminasi hama (tikus, serangga dll.) dan penyakit.

Coffee Beans: Quite dry, uniform its Quality

Warehouse: contamination-free, safe, fairly large, ventilated, strong, not leaking, clean, attractive, organized, must be free from contamination of pests (rodents, insects, etc.). And diseases.



PENGANGKUTAN (SHIPPING)



Biji Kopi : Cukup kering, seragam Mutunya

Alat Angkut : bebas kontaminasi, aman, cukup besar, berventilasi, kuat, tidak bocor, bersih, menarik, tertata, harus bebas dari kontaminasi hama (tikus, serangga dll.) dan penyakit.

Coffee Beans: Quite dry, uniform its Quality

Conveyances : contamination-free, safe, fairly large, ventilated, strong, not leaking, clean, attractive, organized, must be free from contamination of pests (rodents, insects, etc.). And diseases.



31/8/2008

DIVERSIVIKASI PRODUK KOPI

(Diversification Products of Coffee)



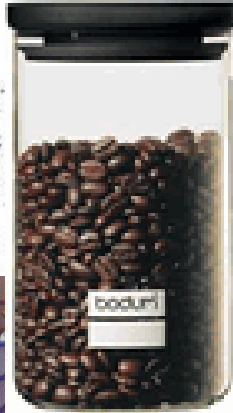


METODE PENYAJIAN KOPI (***SERVING METHODS OF COFFEE***)

WAPU Indonesia Ke - 5



Mangga kopinipun diunjuk !



MUTU KOPI YANG BAIK

Hanya Dapat Diperoleh Dari Buah Kopi Yang Telah Masak Dan Cara Pengolahan Yang Tepat

GOOD QUALITY OF COFFEE

*Can only Retrieved From ripe Coffee chery
And How Right The process*

Alhamdulillah



Selamat Menikmati
Kopi Sekar Arum
Pusat Penelitian Kopi dan Kakao Indonesia



Bagaimana Pak, Bagus ?

Espresso



NIKMATILAH KOPINYA

Have Fun The Coffee



MUDA  **JAYA** *Sedia*

- . JAHE TELOR (AYAM KAMPUNG)
- . SUSU TELOR MADU JAHE (S T M J)
- . KOPI GINGSENG / KOPI / KOPI SUSU
- . KOPI JAHE / AIR JAHE
- . TEH PANAS / ES TEH

- . TELOR ½ MATANG
- . NASI BUNGKUS
- . SODA GEMBIRA / SUSU
- . KOPI TONGKAT ALI. UNTUK MENAMBAH STAMINA, KEJANTANAN D L L.

ANEKA MENU KOPI DI PEDAGANG KAKI LIMA

Various Coffee Menu At Indonesian Traditional Restaurant

Bisa Dibeli Disini !!!



Terapi Air Aktif

Penderita dan Penyakit

Kesehatan & Kesejahteraan Bangsa, Untuk Kita dan Untuk Negeri, Untuk Semua Bangsa dan Semua Bangsa

- SAKIT KEMALU (WORTH)
- GAKSI
- BRONCHITIS
- KENCING BAKIS (DB)
- KENCING DARAH
- WATA WEDAS
- WATA WEDAS
- LUMPUR (STROKE)
- WEDASURAN / OBESITAS
- LERONG
- KOLIBERAN ASAM URAT
- RADANG SELAPUT LENDIR
- RAKER RIFUSIA
- DISENTRI
- MABUK, PUSING, GABANG

- MATA
- IMPOTEN
- KATARAK
- CEPAT LEMAH
- ASTHMA
- DAKAH TINGGI
- TWT PULU PAULU / BATUK
- HIPOTENSI
- KOLIKTERAL
- RADANG OTAK
- FWD TIDAK TERAKUR
- PERKANY SALURAN KENCING
- RADANG / SAKIT PERKENCING
- KANDAK TAYAK
- SAKIT CIBI DAN BAKINGAN
- GAKSIKUS JANTUNG
- BERGASAL ALERGI
- GAKSIKUS / WIND
- TIFUS
- KAPITAN
- KEMARAN CEMAS
- DEMAM BERGASAL
- RADANG AMARAL
- KEMALU dan GAKSIKUS




Kesehatan & Kesejahteraan Bangsa, Untuk Kita dan Untuk Negeri, Untuk Semua Bangsa dan Semua Bangsa



PT. BUKIT BARU

Kemasan 1 Dus isi 24 botol

Rp. 100.000,-

Kesehatan & Kesejahteraan Bangsa, Untuk Kita dan Untuk Negeri, Untuk Semua Bangsa dan Semua Bangsa

2010/11/16 22:42

KOPI GULA



Kopi Sekar Arum, Memang Lebih Harum !!!

Pusat Penelitian Kopi dan Kakao Indonesia



JOOZZZZ-JOOZZZZ-JOZ--JOZ-JOZ—JOZ—JOOOZZZZ-JOOOOZZZZZ