

## DAFTAR PUSTAKA

1. D. Rahayuningsih, A. Siswanto, Dkk., 2010, “**Pengaruh Penggunaan Amilum Singkong Pregelatinasi sebagai Bahan Penghancur terhadap Sifat Fisik Tablet Aspirin**”, Pharmacy, Volume 07, No 03, ISSN 1693-3591.
2. M. Fadilah, Andri, Dkk., 2012, “**Uji Fitokimia dan Aktivitas Antioksidan pada Tanaman Ex Vitro dan in Vitro *Tacca Leontopetaloides***”, Prosiding Seminar Nasional XV “ Kimia dalam Pembangunan ”, ISSN : 0854-4778.
3. E. Muharam, 2011, “**Jalawure (*Tacca Leontopetaloides*) Tumbuhan Liar Sumber Pangan Alternatif Prospektif Nasional dari Kabupaten Garut**”, BKP Kabupaten Garut, Garut.
4. “**Teori Sediaan Apoteker**” Solida, Tablet Umum, Institut Teknologi Bandung, Bandung, <https://www.scribd.com/mobile/document/269095365/01-Tablet-Umum>, Diakses pada tanggal 17 Juli 2017.
5. U. Suherli, 2016, “**Isolasi dan Karakteristik Pati Umbi Taka (*Taacc leotopetaloides* (L.) Kuntze**”, Tugas Akhir, FMIPA-Universitas Garut, Garut, Hlm. 4, 5,6,8,14.
6. Ukpabi UJ., Ukenye Y., et al., 2009, “**Raw-Material Potentials of Nigerian Wild Polynesian Arrowroot (*Tacca Leontopetaloides*) Tubersand Strach**”, Journal of Food Technologi, p. 135-138.
7. Yokosuka Y., Ukenye Y., et al., 2002, “**Spirostanol Saponins from the Rhizomes of *Tacca Chantrieri* and their Cytotoxic Activity**”, Phytochemistry, p. 73-78.
8. M. Rahman dan Adie, 2007, “**Mempelajari Karakteristik Kimia dan Fisik Tepung Tapioka dan MOCAL (Modified Cassa Flour) sebagai Penyalut Kacang pada Produk Kacang Salut**”, Institute Pertanian Bogor, Bogor, Hlm. 21-35.
9. Winarno F., 2002, “**Kimia Pangan**”, PT Gramedia, Jakarta, Hlm. 9-15.

10. Moorthy S., 2004, “**Tropical Sources of Starch**, in: ann Charlotte Eliasson (ed) **Starch in Food: Structure, Function and Application**”, CRC Press, Baco Raton, Florida, p. 53-61.
11. Swinkels J., 1985, “**Source of Starch its Chemistry and Physics**, in: G.M.A.V. Beynum dan J.A Roels (eds). **Starch Conversion Technology**”,Marcel Dekker, Inc, New York, p. 132-145.
12. Taggart P., 2004, “**Starch as an Ingredients Manufacture and Applications**, in: Ann Charlotte Eliasson (ed). **Starch in Food: Structure, Function and Application**”, CRC Press, Baco Raton, Florida, p. 87-95.
13. Charla G., 2012, “**Formulasi Tablet Salut Lapis Tipis Ekstrak Menitan (*Phyllanthus niruri Linn.*) Menggunakan Pragelatinasi Pati Singkong Ftalat Sebagai Bahan Penyalut**”, Skripsi, Universitas Indonesia, Jakarta, Hlm. 11-12, 24.
14. Dirjen POM, 1979, “**Farmakope Indonesia**”, Edisi III, Departemen Kesehatan RI, Jakarta, Hlm. 6, 153, 154, 354, 591.
15. Lachman L., H. Lieberman, et al., 1994, “**Teori dan Praktek Farmasi Industri**”, Terjemahan Siti Suyatmi, Volume II, Edisi III, UI-Press, Jakarta, Hlm. 645-646,648,697,701,702,703,704.
16. Lachman L., H. Lieberman, et al., 1990, “**Pharmaceutical Dosage Form : Tablets**”, Volume 1, 2<sup>nd</sup> Edition, Marcel Dekker Inc, New York, p. 175.
17. Ansel H.C., 1989, “**Pengantar Bentuk Sediaan Farmasi**”, Terjemahan F. Ibrahim, Edisi IV, UI Press, Jakarta, Hlm. 259, 261, 269, 271.
18. Voigt R., 1994, “**Pelajaran Teknologi Farmasi**”, Terjemahan Soendani Noerono, Edisi V, Gadjah Mada University Press, Yogyakarta, Hlm. 172, 177,222.
19. Dirjen POM, 1995, “**Farmakope Indonesia**”, Edisi IV, Departemen Kesehatan RI, Jakarta, Hlm. 6, 515, 1034.
20. Tim Dosen, 2016, “**Modul Praktikum Teknologi Farmasi Sediaan Solida**”, Universitas Garut, Garut, Hlm. 66, 67, 68, 69, 71, 73-74, 80.

21. Goskonda S.R., 2009, “**Handbook of Pharmaceutical Excipients**”, 6<sup>th</sup> Edition, Pharmaceutical Press and American Pharmacists Assosiation, London, p. 691.
22. Feri K., 2010, “**Teknologi Modifikasi Pati dan Aplikasinya di Industri Pangan**”, Departemen Ilmu Teknologi Pangan, Institut Pertanian Bogor, Bogor.
23. Rowe R.C., 2006, “**Handbook Of Pharmaceutical Excipients**”, 5<sup>th</sup> Edition, The Pharmacetical Press, London, p. 725, 731.
24. Nafrialdi dan Setiawati A., 2007, “**Farmakologi dan Terapi**”, Edisi V, Depertemen Farmakologi dan Terapetik Fakultas Kedokteran UI, Jakarta, Hlm. 278.
25. Ikatan Sarjana Farmasi Indonesia, 2009, “**ISO Indonesia**”, Vol 44, PT ISFI, Jakarta, Hlm. 62.
26. “**Chlorpeniramine maleat**”, Medscape, (Aplikasi) 2017, Diakses tanggal 11 Januari 2017, 09:23.
27. Dirjen POM, 1995, “**Farmakope Indonesia**”, Edisi V, Departemen Kesehatan RI, Jakarta, Hlm. 700, 911, 1231.

**LAMPIRAN 1**  
**TANAMAN UJI**



**Gambar 1.4** Umbi taka (*Tacca leontopetaloides* (L.) Kuntze)

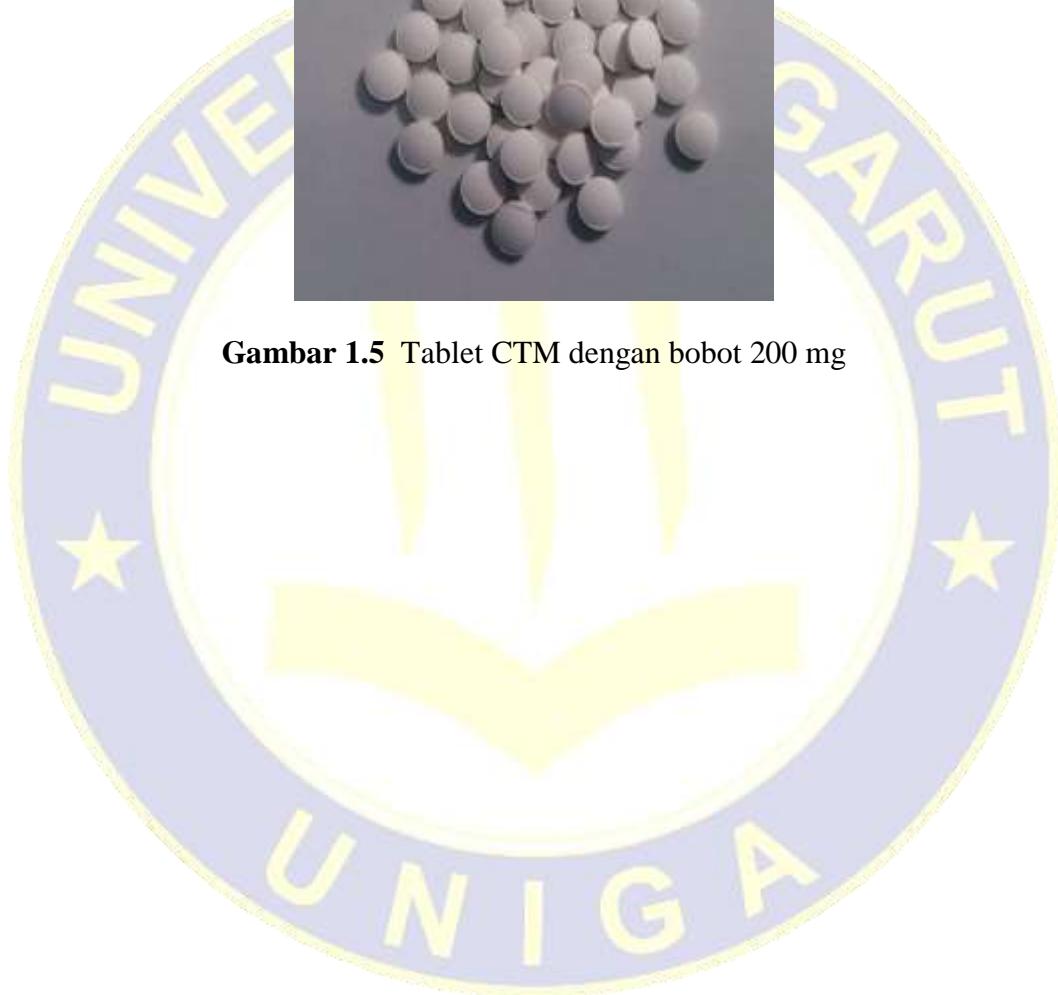


## **LAMPIRAN 2**

### **TABLET CTM (CHLORPENIRAMINE MALEAT)**

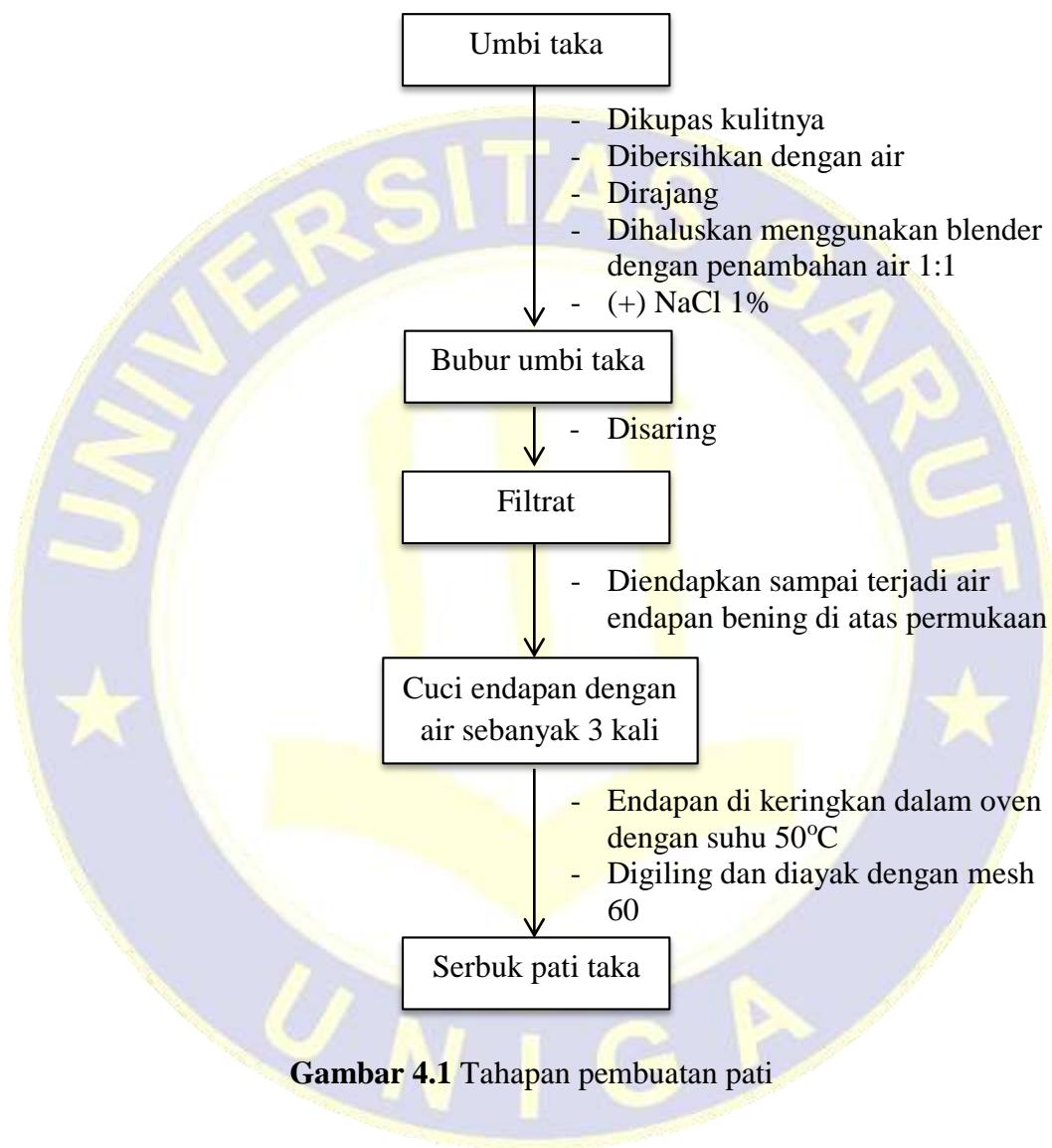


**Gambar 1.5** Tablet CTM dengan bobot 200 mg



### LAMPIRAN 3

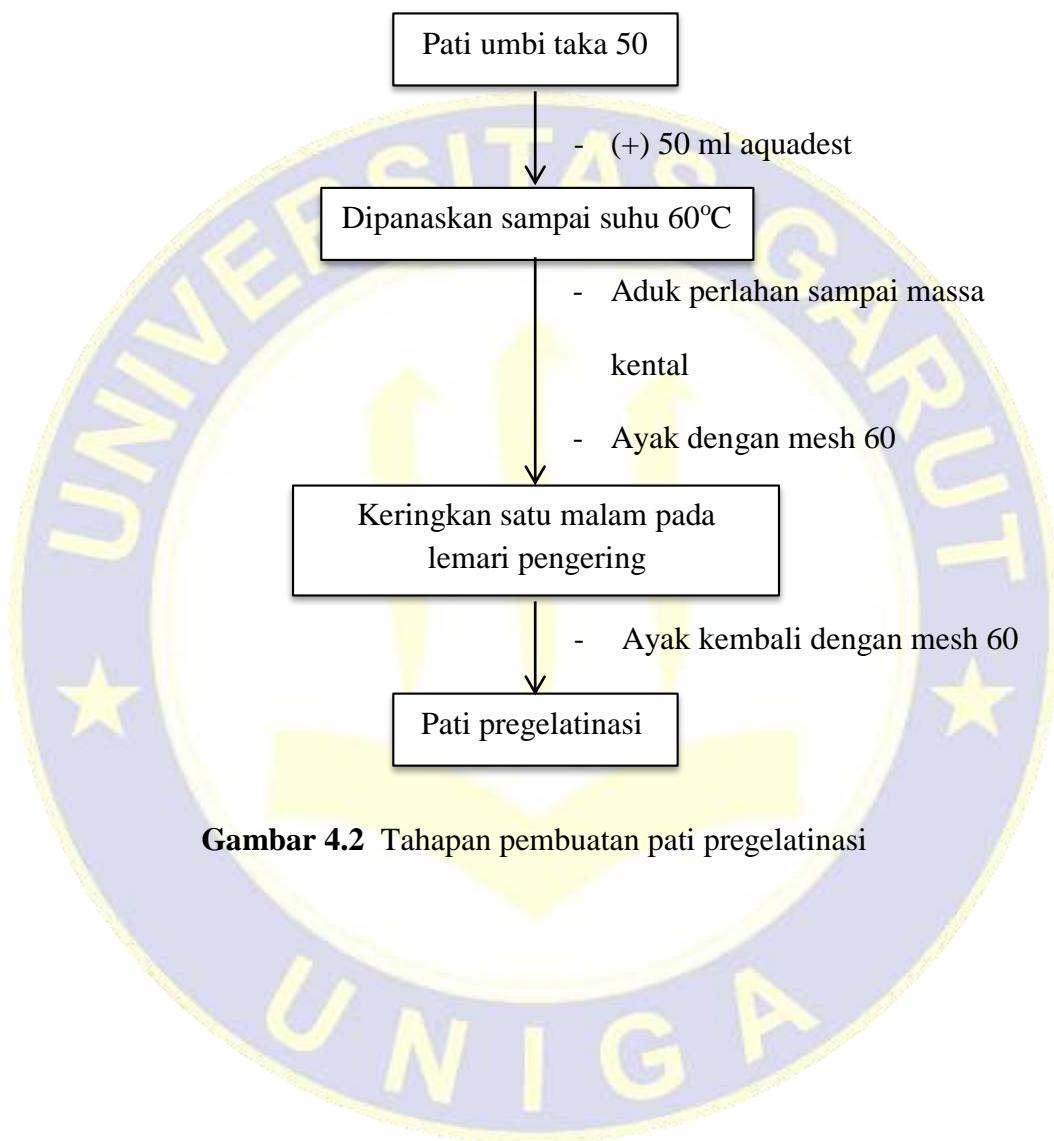
#### DIAGRAM PEMBUATAN PATI



Gambar 4.1 Tahapan pembuatan pati

## LAMPIRAN 4

### DIAGRAM PEMBUATAN PATI PREGELATINASI



**Gambar 4.2** Tahapan pembuatan pati pregelatinasi

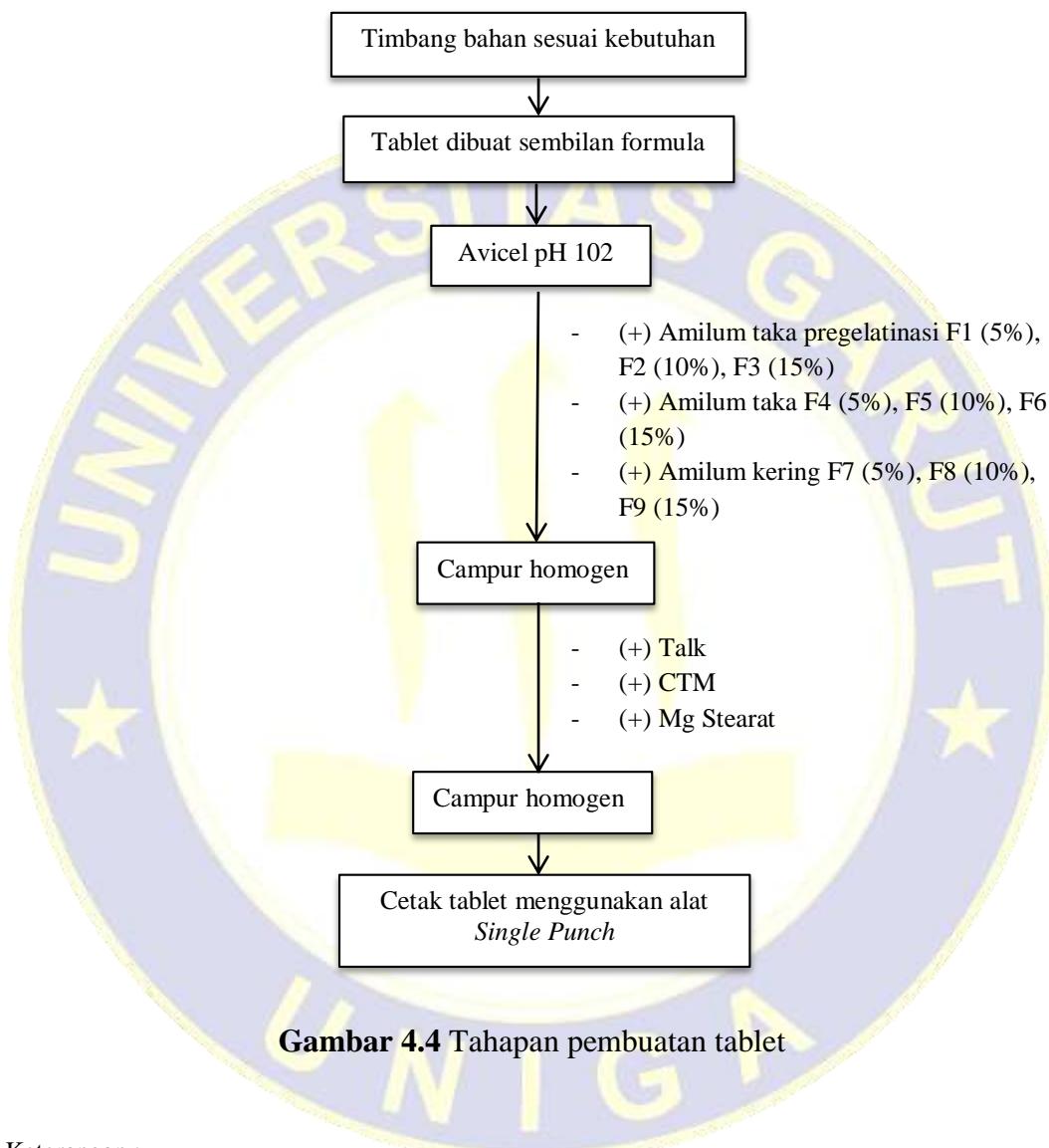
## LAMPIRAN 5

### DIAGRAM UJI KARAKTERISASI PATI DAN PATI PREGELATINASI



## LAMPIRAN 6

### DIAGRAM PEMBUATAN TABLET



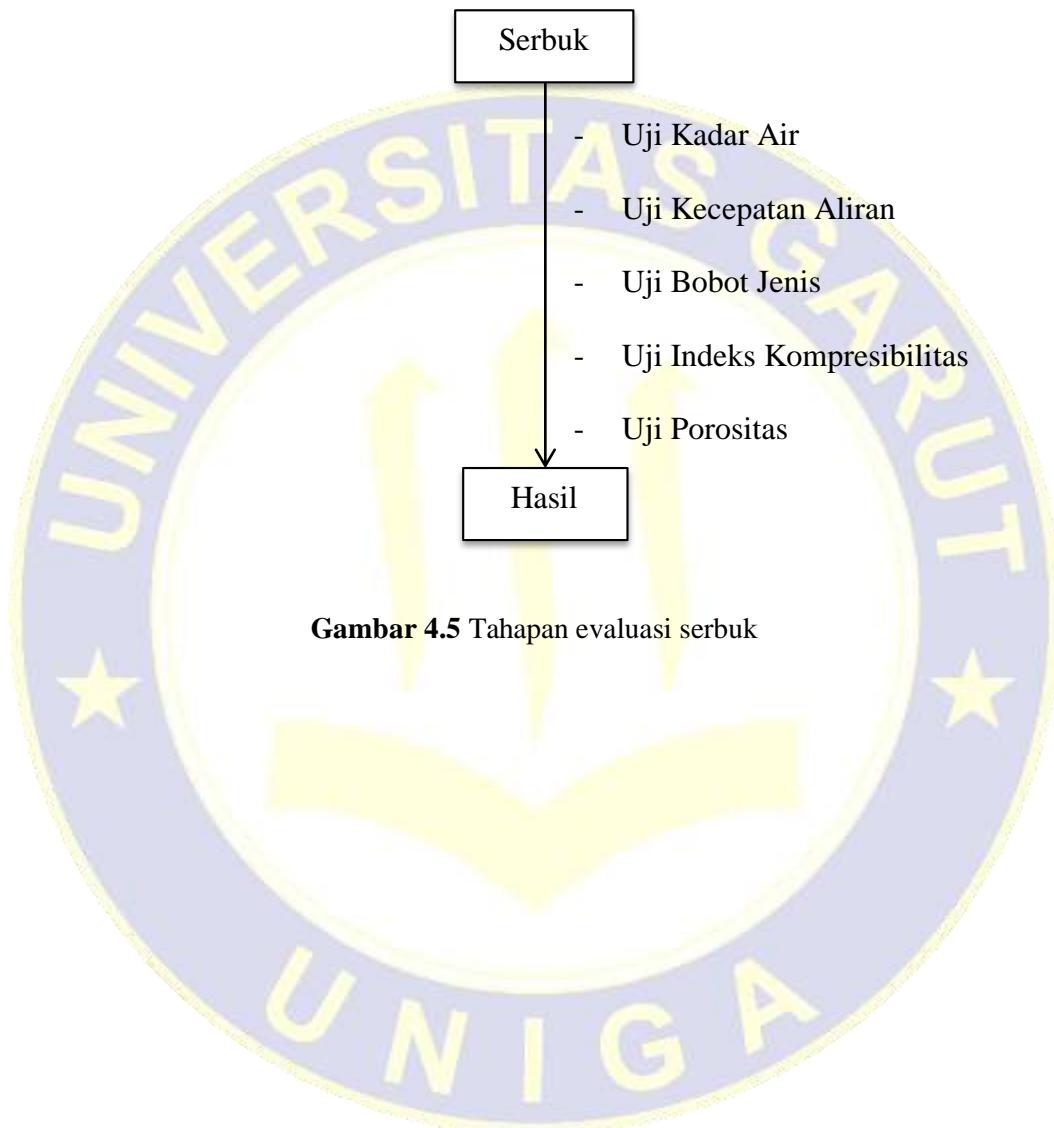
Gambar 4.4 Tahapan pembuatan tablet

Keterangan :

- F1 = Formula dengan amilum taka pregelatinasi 5%.
- F2 = Formula dengan amilum taka pregelatinasi 10% .
- F3 = Formula dengan amilum taka pregelatinasi 15% .
- F4 = Formula dengan amilum taka 5%.
- F5 = Formula dengan amilum taka 10%.
- F6 = Formula dengan amilum taka 15%.
- F7 = Formula dengan amilum kering 5%.
- F8 = Formula dengan amilum kering 10%.
- F9 = Formula dengan amilum kering 15%.

**LAMPIRAN 7**

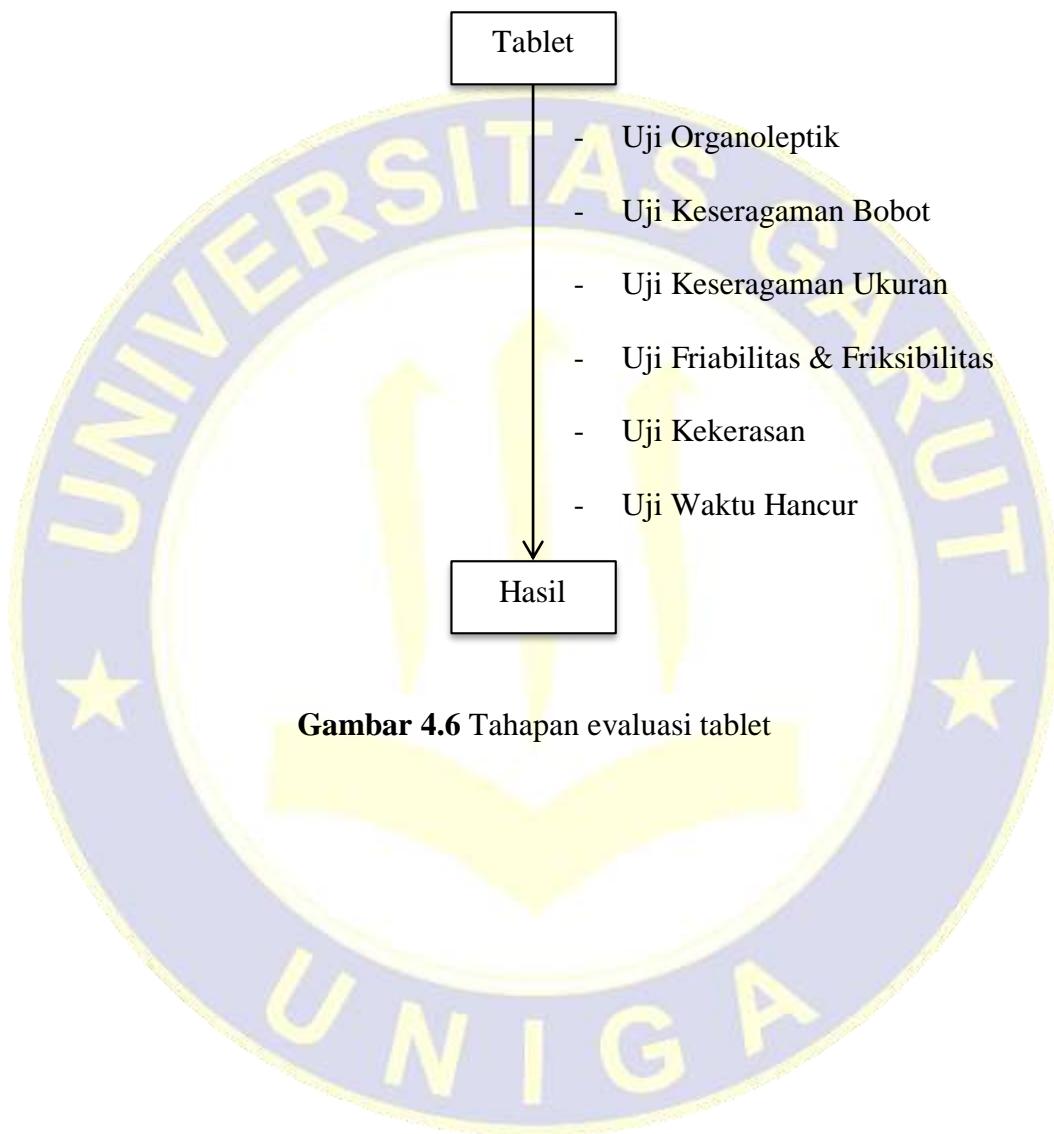
**DIAGRAM EVALUASI SERBUK**



**Gambar 4.5** Tahapan evaluasi serbuk

**LAMPIRAN 8**

**DIAGRAM EVALUASI TABLET**



**Gambar 4.6** Tahapan evaluasi tablet

## LAMPIRAN 9

### HASIL PENGUJIAN

**Tabel 5.3**

Hasil Pengujian Keseragaman Bobot, Keseragaman Ukuran dan Kekerasan

#  
Check Hardness : 04.05.2016 Diameter : 04.05.2016  
Check Balance : 15.08.2016 Check Thickness : 04.05.2016

Date : 17.10.2017 Time : 09:40

Correction value : 0.00  
Nominal diameter : 10.0 mm

Product : TEST  
Product number : 1  
Batch/Lot :  
Remarks :

Number of samples : 20 20 20 20

#### M E A S U R I N G   V A L U E S

No.	Weight	Thickness	Hardness	Diameter
1	205,8 mg	3,14 mm	74 N	10,09 mm
2	217,2 mg	3,13 mm	75 N	10,09 mm
3	216,1 mg	3,13 mm	75 N	10,10 mm
4	203,5 mg	3,13 mm	69 N	10,07 mm
5	207,5 mg	3,14 mm	74 N	10,08 mm
6	203,9 mg	3,13 mm	71 N	10,08 mm
7	206,4 mg	3,16 mm	70 N	10,08 mm
8	217,6 mg	3,16 mm	74 N	10,07 mm
9	205,7 mg	3,13 mm	70 N	10,08 mm
10	219,7 mg	3,16 mm	75 N	10,08 mm
11	207,4 mg	3,15 mm	71 N	10,08 mm
12	206,0 mg	3,15 mm	67 N	10,08 mm
13	205,9 mg	3,14 mm	71 N	10,08 mm
14	218,8 mg	3,15 mm	73 N	10,08 mm
15	213,7 mg	3,15 mm	74 N	10,08 mm
16	203,3 mg	3,13 mm	65 N	10,08 mm
17	205,3 mg	3,14 mm	67 N	10,08 mm
18	209,6 mg	3,16 mm	74 N	10,08 mm
19	208,6 mg	3,15 mm	74 N	10,10 mm
20	205,8 mg	3,14 mm	68 N	10,09 mm

#### S T A T I S T I C S

No. Stat :	20	20	20	20
X min :	203,3 mg	3,13 mm	65 N	10,07 mm
X max :	219,7 mg	3,16 mm	75 N	10,10 mm
X max-min :	16,4 mg	0,03 mm	10 N	0,03 mm
X average :	209,39 mg	3,14 mm	71,55 N	10,08 mm
X S :	5,55	0,01 mm	3,10 N	0,01 mm
X rel :	2,65 %	0,36 %	4,34 %	0,08 %

Signature : .....

## LAMPIRAN 9

### (LANJUTAN)

F1

Check Hardness : 04.05.2016 Diameter : 04.05.2016  
Check Balance : 15.08.2016 Check Thickness : 04.05.2016

Date : 17.10.2017 Time : 10:06

Correction value : 0.00  
Nominal diameter : 10.0 mm

Product : TEST  
Product number : 1  
Batch/Lot :  
Remarks :

Number of samples : 20 20 20 20

#### M E A S U R I N G V A L U E S

	Weight	Thickness	Hardness	Diameter
1	201,9 mg	3,11 mm	66 N	10,07 mm
2	208,5 mg	3,09 mm	70 N	10,10 mm
3	202,7 mg	3,10 mm	71 N	10,10 mm
4	206,5 mg	3,11 mm	69 N	10,09 mm
5	218,7 mg	3,12 mm	75 N	10,10 mm
6	206,8 mg	3,11 mm	72 N	10,08 mm
7	216,6 mg	3,10 mm	74 N	10,11 mm
8	208,5 mg	3,11 mm	73 N	10,08 mm
9	213,9 mg	3,13 mm	75 N	10,10 mm
10	219,7 mg	3,13 mm	75 N	10,11 mm
11	206,6 mg	3,10 mm	73 N	10,07 mm
12	206,8 mg	3,11 mm	70 N	10,08 mm
13	216,7 mg	3,12 mm	73 N	10,09 mm
14	209,8 mg	3,12 mm	74 N	10,08 mm
15	205,7 mg	3,09 mm	67 N	10,07 mm
16	201,8 mg	3,10 mm	70 N	10,07 mm
17	203,2 mg	3,09 mm	69 N	10,08 mm
18	204,4 mg	3,10 mm	70 N	10,09 mm
19	202,4 mg	3,11 mm	66 N	10,07 mm
20	213,2 mg	3,13 mm	75 N	10,10 mm

#### S T A T I S T I C S

No. Stat :	20	20	20	20
X min :	201,8 mg	3,09 mm	66 N	10,07 mm
X max :	219,7 mg	3,13 mm	75 N	10,11 mm
X max-min :	17,9 mg	0,04 mm	9 N	0,04 mm
X average :	208,82 mg	3,11 mm	71,35 N	10,09 mm
X S :	5,94	0,01 mm	3,00 N	0,01 mm
X rel :	2,85 %	0,42 t	4,20 %	0,14 t

Signature : .....

## LAMPIRAN 9

### (LANJUTAN)

43

Check Hardness : 04.05.2016 Diameter : 04.05.2016  
Check Balance : 15.08.2016 Check Thickness : 04.05.2016

Date : 17.10.2017 Time : 10:24

Correction value : 0.00  
Nominal diameter : 10.0 mm

Product : TEST  
Product number : 1  
Batch/Lot :  
Remarks :

Number of samples : 20 20 20 20

#### M E A S U R I N G   V A L U E S

	Weight	Thickness	Hardness	Diameter
1	201,7 mg	3,09 mm	71 N	10,10 mm
2	202,8 mg	3,08 mm	69 N	10,07 mm
3	199,6 mg	3,07 mm	67 N	10,10 mm
4	204,2 mg	3,08 mm	74 N	10,09 mm
5	202,5 mg	3,07 mm	74 N	10,11 mm
6	203,3 mg	3,10 mm	70 N	10,10 mm
7	199,1 mg	3,05 mm	70 N	10,09 mm
8	201,7 mg	3,08 mm	68 N	10,10 mm
9	201,9 mg	3,07 mm	72 N	10,10 mm
10	204,0 mg	3,09 mm	68 N	10,09 mm
11	200,2 mg	3,06 mm	69 N	10,11 mm
12	200,9 mg	3,09 mm	68 N	10,10 mm
13	200,3 mg	3,07 mm	68 N	10,10 mm
14	202,0 mg	3,08 mm	66 N	10,07 mm
15	203,4 mg	3,09 mm	73 N	10,13 mm
16	200,2 mg	3,07 mm	65 N	10,09 mm
17	201,3 mg	3,08 mm	65 N	10,10 mm
18	199,4 mg	3,08 mm	63 N	10,10 mm
19	205,2 mg	3,09 mm	74 N	10,10 mm
20	198,5 mg	3,06 mm	66 N	10,10 mm

#### S T A T I S T I C S

No. Stat :	20	20	20	20
X min :	198,5 mg	3,05 mm	63 N	10,07 mm
X max :	205,2 mg	3,10 mm	74 N	10,13 mm
X max-min :	6,7 mg	0,05 mm	11 N	0,06 mm
X average :	201,65 mg	3,08 mm	69 N	10,10 mm
X S :	1,89	0,01 mm	3,24 N	0,01 mm
X rel :	0,94 %	0,61 ‰	4,70 %	0,13 %

Signature : .....

## LAMPIRAN 9

### (LANJUTAN)

F4  
Check Hardness : 04.05.2016 Diameter : 04.05.2016  
Check Balance : 15.08.2016 Check Thickness : 04.05.2016

Date : 17.10.2017 Time : 10:45

Correction value : 0.00  
Nominal diameter : 10.0 mm

Product : TEST  
Product number : 1  
Batch/Lot :  
Remarks :

Number of samples : 20 20 20 20

#### M E A S U R I N G   V A L U E S

No.	Weight	Thickness	Hardness	Diameter
1	200,9 mg	3,13 mm	67 N	10,08 mm
2	207,9 mg	3,13 mm	70 N	10,08 mm
3	206,3 mg	3,14 mm	72 N	10,08 mm
4	217,4 mg	3,15 mm	74 N	10,10 mm
5	209,9 mg	3,13 mm	71 N	10,09 mm
6	219,1 mg	3,13 mm	75 N	10,09 mm
7	201,9 mg	3,14 mm	70 N	10,07 mm
8	203,5 mg	3,15 mm	71 N	10,07 mm
9	200,4 mg	3,13 mm	79 N	10,07 mm
10	207,1 mg	3,14 mm	73 N	10,07 mm
11	219,2 mg	3,15 mm	74 N	10,07 mm
12	207,3 mg	3,15 mm	68 N	10,09 mm
13	212,4 mg	3,15 mm	71 N	10,10 mm
14	206,9 mg	3,15 mm	73 N	10,07 mm
15	201,8 mg	3,13 mm	72 N	10,08 mm
16	208,2 mg	3,13 mm	70 N	10,08 mm
17	218,7 mg	3,14 mm	73 N	10,10 mm
18	201,5 mg	3,15 mm	65 N	10,08 mm
19	202,4 mg	3,15 mm	71 N	10,08 mm
20	202,6 mg	3,13 mm	70 N	10,08 mm

#### S T A T I S T I C S

No. Stat :	20	20	20	20
X min :	200,4 mg	3,13 mm	65 N	10,07 mm
X max :	219,2 mg	3,15 mm	79 N	10,10 mm
X max-min :	18,8 mg	0,02 mm	14 N	0,03 mm
X average :	207,77 mg	3,14 mm	71,45 N	10,08 mm
X S :	6,43	0,01 mm	3,02 N	0,01 mm
X rel :	3,10 %	0,29 %	4,22 %	0,10 %

Signature : .....

## LAMPIRAN 9

### (LANJUTAN)

FS

Check Hardness : 04.05.2016 Diameter : 04.05.2016  
Check Balance : 15.08.2016 Check Thickness : 04.05.2016

Date : 17.10.2017 Time : 11:03

Correction value : 0.00  
Nominal diameter : 10.0 mm

Product : TEST  
Product number : 1  
Batch/Lot :  
Remarks :

Number of samples : 20 20 20 20

#### M E A S U R I N G   V A L U E S

No.	Weight	Thickness	Hardness	Diameter
1	212,1 mg	3,08 mm	70 N	10,10 mm
2	201,3 mg	3,09 mm	69 N	10,09 mm
3	207,9 mg	3,08 mm	70 N	10,09 mm
4	205,5 mg	3,09 mm	71 N	10,09 mm
5	203,8 mg	3,09 mm	72 N	10,11 mm
6	199,9 mg	3,08 mm	72 N	10,09 mm
7	205,7 mg	3,10 mm	75 N	10,12 mm
8	206,3 mg	3,10 mm	71 N	10,12 mm
9	205,4 mg	3,10 mm	72 N	10,11 mm
10	207,9 mg	3,11 mm	74 N	10,11 mm
11	207,2 mg	3,10 mm	71 N	10,08 mm
12	218,7 mg	3,14 mm	74 N	10,08 mm
13	204,6 mg	3,11 mm	72 N	10,09 mm
14	218,1 mg	3,13 mm	73 N	10,10 mm
15	199,2 mg	3,09 mm	70 N	10,08 mm
16	216,9 mg	3,12 mm	71 N	10,08 mm
17	201,7 mg	3,08 mm	67 N	10,08 mm
18	217,2 mg	3,11 mm	71 N	10,08 mm
19	199,9 mg	3,08 mm	72 N	10,08 mm
20	200,0 mg	3,08 mm	72 N	10,09 mm

#### S T A T I S T I C S

No. Stat :	20	20	20	20
X min :	199,2 mg	3,08 mm	67 N	10,08 mm
X max :	218,1 mg	3,14 mm	75 N	10,12 mm
X max-min :	18,9 mg	0,06 mm	8 N	0,04 mm
X average :	206,35 mg	3,10 mm	71,45 N	10,09 mm
X S :	5,96	0,02 mm	1,82 N	0,01 mm
X rel :	2,89 %	0,57 %	2,55 %	0,14 %

Signature : .....

## LAMPIRAN 9

### (LANJUTAN)

76

Check Hardness : 04.05.2016 Diameter : 04.05.2016  
Check Balance : 15.08.2016 Check Thickness : 04.05.2016

Date : 17.10.2017 Time : 11:29

Correction value : 0.00  
Nominal diameter : 10.0 mm

Product : TEST  
Product number : 1  
Batch/Lot :  
Remarks :

Number of samples : 20 20 20 20

#### M E A S U R I N G   V A L U E S

No.	Weight	Thickness	Hardness	Diameter
1	214,5 mg	3,10 mm	73 N	10,09 mm
2	201,8 mg	3,07 mm	70 N	10,07 mm
3	202,6 mg	3,06 mm	67 N	10,11 mm
4	210,1 mg	3,09 mm	73 N	10,09 mm
5	210,3 mg	3,10 mm	74 N	10,10 mm
6	199,7 mg	3,08 mm	71 N	10,09 mm
7	204,4 mg	3,07 mm	69 N	10,09 mm
8	199,2 mg	3,07 mm	70 N	10,09 mm
9	214,8 mg	3,10 mm	72 N	10,09 mm
10	214,1 mg	3,09 mm	73 N	10,09 mm
11	199,1 mg	3,07 mm	67 N	10,10 mm
12	201,4 mg	3,08 mm	69 N	10,10 mm
13	202,2 mg	3,07 mm	70 N	10,09 mm
14	201,3 mg	3,08 mm	70 N	10,08 mm
15	211,2 mg	3,08 mm	74 N	10,11 mm
16	198,9 mg	3,07 mm	68 N	10,10 mm
17	201,3 mg	3,07 mm	69 N	10,10 mm
18	200,7 mg	3,06 mm	70 N	10,08 mm
19	200,2 mg	3,06 mm	72 N	10,09 mm
20	202,1 mg	3,07 mm	70 N	10,09 mm

#### S T A T I S T I C S

No. Stat :	20	20	20	20
X min :	198,9 mg	3,06 mm	67 N	10,07 mm
X max :	214,8 mg	3,10 mm	74 N	10,11 mm
X max-min :	15,9 mg	0,04 mm	7 N	0,04 mm
X average :	204,66 mg	3,08 mm	70,55 N	10,09 mm
X S :	5,75	0,01 mm	2,14 N	0,01 mm
X rel :	2,81 %	0,42 %	3,03 %	0,10 %

Signature : .....

## LAMPIRAN 9

### (LANJUTAN)

F7

Check Hardness : 04.05.2016 Diameter : 04.05.2016  
Check Balance : 15.08.2016 Check Thickness : 04.05.2016

Date : 17.10.2017 Time : 11:51

Correction value : 0.00  
Nominal diameter : 10.0 mm

Product : TEST  
Product number : 1  
Batch/Lot :  
Remarks :

Number of samples : 20 20 20 20

#### M E A S U R I N G V A L U E S

	Weight	Thickness	Hardness	Diameter
1	209,1 mg	3,15 mm	73 N	10,09 mm
2	199,8 mg	3,12 mm	71 N	10,08 mm
3	208,3 mg	3,14 mm	73 N	10,09 mm
4	212,7 mg	3,13 mm	74 N	10,10 mm
5	211,9 mg	3,14 mm	73 N	10,10 mm
6	218,4 mg	3,14 mm	73 N	10,10 mm
7	196,8 mg	3,12 mm	71 N	10,08 mm
8	201,7 mg	3,13 mm	73 N	10,08 mm
9	198,9 mg	3,12 mm	71 N	10,09 mm
10	206,6 mg	3,14 mm	72 N	10,09 mm
11	215,8 mg	3,16 mm	72 N	10,08 mm
12	204,7 mg	3,12 mm	71 N	10,09 mm
13	214,5 mg	3,15 mm	73 N	10,08 mm
14	209,4 mg	3,14 mm	72 N	10,09 mm
15	192,9 mg	3,12 mm	71 N	10,09 mm
16	216,3 mg	3,16 mm	74 N	10,08 mm
17	209,4 mg	3,14 mm	73 N	10,09 mm
18	208,9 mg	3,14 mm	74 N	10,09 mm
19	203,7 mg	3,13 mm	73 N	10,10 mm
20	219,8 mg	3,16 mm	75 N	10,10 mm

#### S T A T I S T I C S

No. Stat :	20	20	20	20
X min :	192,9 mg	3,12 mm	71 N	10,08 mm
X max :	219,8 mg	3,16 mm	75 N	10,10 mm
X max-min :	26,9 mg	0,04 mm	4 N	0,02 mm
X average :	207,98 mg	3,14 mm	72,6 N	10,09 mm
X S :	7,39	0,01 mm	1,19 N	0,01 mm
X rel :	3,55 %	0,44 %	1,64 %	0,08 %

Signature : .....

## LAMPIRAN 9

### (LANJUTAN)

p8

Check Hardness : 04.05.2016 Diameter : 04.05.2016  
Check Balance : 15.08.2016 Check Thickness : 04.05.2016

Date : 17.10.2017 Time : 12:17

Correction value : 0.00  
Nominal diameter : 10.0 mm

Product : TEST  
Product number : 1  
Batch/Lot :  
Remarks :

Number of samples : 20 20 20 20

#### M E A S U R I N G V A L U E S

	Weight	Thickness	Hardness	Diameter
1	216,1 mg	3,09 mm	73 N	10,09 mm
2	218,2 mg	3,08 mm	74 N	10,10 mm
3	208,2 mg	3,08 mm	70 N	10,08 mm
4	207,1 mg	3,07 mm	70 N	10,08 mm
5	211,9 mg	3,08 mm	75 N	10,11 mm
6	199,7 mg	3,07 mm	70 N	10,08 mm
7	199,9 mg	3,09 mm	68 N	10,11 mm
8	209,5 mg	3,10 mm	68 N	10,10 mm
9	199,8 mg	3,08 mm	69 N	10,09 mm
10	203,9 mg	3,10 mm	70 N	10,09 mm
11	209,3 mg	3,08 mm	71 N	10,08 mm
12	205,8 mg	3,10 mm	71 N	10,07 mm
13	214,7 mg	3,12 mm	73 N	10,09 mm
14	206,6 mg	3,09 mm	72 N	10,08 mm
15	213,7 mg	3,11 mm	72 N	10,08 mm
16	203,9 mg	3,08 mm	71 N	10,09 mm
17	209,4 mg	3,08 mm	70 N	10,08 mm
18	205,8 mg	3,08 mm	71 N	10,08 mm
19	207,6 mg	3,09 mm	70 N	10,09 mm
20	206,0 mg	3,09 mm	70 N	10,09 mm

#### S T A T I S T I C S

No. Stat :	20	20	20	20
X min :	199,7 mg	3,07 mm	68 N	10,07 mm
X max :	218,2 mg	3,12 mm	75 N	10,11 mm
X max-min :	8,5 mg	0,05 mm	7 N	0,04 mm
X average :	207,96 mg	3,09 mm	70,9 N	10,09 mm
X S :	5,35 mg	0,01 mm	1,83 N	0,01 mm
X rel :	2,57 mg	0,41 %	2,58 %	0,10 %

Signature :.....

## LAMPIRAN 9

### (LANJUTAN)

FJ  
Check Hardness : 04.05.2016 Diameter : 06.05.2016  
Check Balance : 15.08.2016 Check Thickness : 04.05.2016

Date : 17.10.2017 Time : 12:42

Correction value : 0.00  
Nominal diameter : 10.0 mm

Product : TEST  
Product number : 1  
Batch/Lot :  
Remarks :

Number of samples : 20 20 20 20

#### M E A S U R I N G   V A L U E S

No.	Weight	Thickness	Hardness	Diameter
1	199,3 mg	3,06 mm	67 N	10,10 mm
2	199,5 mg	3,07 mm	68 N	10,10 mm
3	199,6 mg	3,07 mm	67 N	10,11 mm
4	199,1 mg	3,06 mm	65 N	10,10 mm
5	200,3 mg	3,07 mm	72 N	10,09 mm
6	217,8 mg	3,08 mm	74 N	10,10 mm
7	214,8 mg	3,09 mm	73 N	10,09 mm
8	200,2 mg	3,07 mm	70 N	10,09 mm
9	200,8 mg	3,08 mm	72 N	10,08 mm
10	199,7 mg	3,08 mm	70 N	10,09 mm
11	200,9 mg	3,09 mm	71 N	10,08 mm
12	201,4 mg	3,08 mm	70 N	10,09 mm
13	202,2 mg	3,08 mm	72 N	10,09 mm
14	211,4 mg	3,08 mm	73 N	10,11 mm
15	218,3 mg	3,08 mm	74 N	10,11 mm
16	198,9 mg	3,08 mm	68 N	10,09 mm
17	201,3 mg	3,07 mm	72 N	10,09 mm
18	216,2 mg	3,10 mm	72 N	10,08 mm
19	219,0 mg	3,11 mm	75 N	10,10 mm
20	199,9 mg	3,09 mm	71 N	10,08 mm

#### S T A T I S T I C S

No. Stat :	20	20	20	20
X min :	198,9 mg	3,06 mm	65 N	10,08 mm
X max :	219 mg	3,11 mm	75 N	10,11 mm
X max-min :	20,1 mg	0,05 mm	10 N	0,03 mm
X average :	205,22 mg	3,08 mm	70,8 N	10,09 mm
X S :	7,88	0,01 mm	2,67 N	0,01 mm
X rel :	3,84 %	0,40 %	3,77 %	0,10 %

Signature : .....

**LAMPIRAN 10**  
**ANALISIS STATISTIK WAKTU HANCUR**

**Tabel 5.6**  
 Hasil Analisis Statistik ANOVA dan LSD Waktu Hancur

Kelompok Desintegrand	Waktu Hancur								
	ATP (5%)	ATP (10%)	ATP (15%)	AT (5%)	AT (10%)	AT (15%)	AK (5%)	AK (10%)	AK (15%)
ATP (5%)	-	1.142*±0,29	3.572*±0,29	1.871*±0,29	1.936*±0,29	4.583*±0,29	1.807*±0,29	1.865*±0,29	2.844*±0,29
ATP(10%)	1.142*±0,29	-	2.430*±0,29	0.728*±0,29	0.794*±0,29	3.440*±0,29	0.664*±0,29	0.722*±0,29	1.701*±0,29
ATP(15%)	-3.572*±0,29	-2.430*±0,29	-	-1.701*±0,29	-1.636*±0,29	1.010*±0,29	-1.765*±0,29	-1.707*±0,29	-0.728*±0,29
AT (5%)	-1.871*±0,29	-0.728*±0,29	1.701*±0,29	-	0.065±0,29	2.712*±0,29	-0.064*±0,29	-0.006*±0,29	0.972*±0,29
AT (10%)	-1.936*±0,29	-0.794*±0,29	1.636*±0,29	-0.065*±0,29	-	2.646*±0,29	-0.129*±0,29	-0.071*±0,29	0.907*±0,29
AT (15%)	-4.583*±0,29	-3.440*±0,29	-1.010*±0,29	-2.712*±0,29	-2.646*±0,29	-	-2.776*±0,29	-2.718*±0,29	-1.739*±0,29
AK (5%)	-1.807*±0,29	-0.664*±0,29	1.765*±0,29	-0.064±0,29	0.129±0,29	2.776*±0,29	-	0.058*±0,29	1.036*±0,29
AK (10%)	-1.865±0,29	-0.722*±0,29	1.707*±0,29	0.006±0,29	0.071±0,29	2.718*±0,29	-0.058*±0,29	-	0.978*±0,29
AK (15%)	-2.844*±0,29	-1.701*±0,29	0.726*±0,29	-0.972*±0,29	-0.907*±0,29	1.739*±0,29	-1.036*±0,29	-0.978*±0,29	-

**Keterangan :**

- ATP : Amilum Taka Pregelatinasi
- AT : Amilum Taka
- AK : Amilum Kering

**LAMPIRAN 11**  
**GAMBARAN HASIL**

**Tabel 5.7**  
 Hasil Evaluasi Serbuk dan Evaluasi Tablet

Keterangan	Formul a 1	Formul a 2	Formul a 3	Formul a 4	Formul a 5	Formul a 6	Formul a 7	Formul a 8	Formul a 9
Kadar air	1,73 %	1,17 %	2,98 %	2,15 %	2,27 %	2,34 %	1,71 %	1,83 %	1,41 %
Kecepatan aliran	19,4211 derajat	18,4347 derajat	17,4213 derajat	18,1219 derajat	18,0250 derajat	17,7067 derajat	18,3818 derajat	18,3315 derajat	18,3289 derajat
Bj benar	1,3568 gram	1,4099 gram	1,5593 gram	1,4028 gram	1,4990 gram	1,7907 gram	1,3568 gram	1,8825 gram	1,9050 gram
Bj nyata	0,3930 g/mL	0,4018 g/mL	0,4148 g/mL	0,3965 g/mL	0,4036 g/mL	0,4167 g/mL	0,3982 g/mL	0,4091 g/mL	0,4266 g/mL
Bj mampat	0,5556 g/mL	0,5357 g/mL	0,5085 g/mL	0,5882 g/mL	0,5769 g/mL	0,5263 g/mL	0,5556 g/mL	0,5263 g/mL	0,5172 g/mL
Kompresibilitas	29,2550 %	24,9970 %	18,4297 %	32,5965 %	30,0420 %	20,8333 %	28,3158 %	22,2695 %	17,5319 %
Porositas	32,7571 %	32,9305 %	31,5220 %	29,3535 %	28,2232 %	26,4523 %	32,7571 %	25,1624 %	25,3415 %
Keseragaman bobot	209,39 mg	208,82 mg	201,65 mg	207,77 mg	206,35 mg	204,66 mg	207,98 mg	207,96 mg	205,22 mg
Keseragaman ukuran	3,14 mm /10,08 mm	3,11 mm /10,09 mm	3,08 mm /10,10 mm	3,14 mm /10,08 mm	3,10 mm /10,09 mm	3,08 mm /10,09 mm	3,14 mm /10,09 mm	3,09 mm /10,09 mm	3,08 mm /10,09 mm
Kekerasan	7,2981 kg	7,2777 kg	7,0380 kg	7,2879 kg	7,2879 kg	7,1961 kg	7,4052 kg	7,2318 kg	7,2216 kg
Friabilitas	1,25 %	1,43 %	1,19 %	1,50 %	1,67 %	1,25 %	1,75 %	1,43 %	1,43 %
Friksibilitas	1,75 %	1,75 %	1,43 %	1,50 %	1,43 %	1,19 %	1,50 %	1,90 %	1,43 %
Waktu hancur	17,49 detik	16,35 detik	13,92 detik	15,62 detik	15,56 detik	12,91 detik	15,69 detik	15,63 detik	14,65 detik