

Table S1. Protein digestibility (PD) of legumes using various processing methods. ↓ indicates decreased PD. ↑ indicates increased PD. In addition, the effect on anti-nutritional factors (ANF) is given when provided in the references. Empty cell denotes that information was not provided.

| Process | Type of legume (cultivar) | Specification | Soaked | Unsoaked | Process conditions (T; t; ΔH) | Methodology ¹ | PD unprocessed (%) | PD processed (%) | Effect | Reference |
|---------|--|-------------------------------|--------|----------|-------------------------------|--|--------------------|------------------|----------------------|-----------|
| Cooking | Bean flour (<i>Phaseolus vulgaris</i>) | <i>Raba</i> | * | | 30 min | CP | 24.8 | 23.0 | ↓ (significantly) | [15] |
| | | <i>Warta</i> | * | | 40 min | | 26.2 | 21.3 | | |
| | Pea (<i>Pisum sativum</i>) | <i>Milwa</i> | * | | 40 min | | 25.9 | 27.6 | ↑ (significantly) | |
| | | <i>Medal</i> | * | | 40 min | | 28.4 | 27.5 | ↓ (significantly) | |
| | Lentil (<i>Lens culinaris</i>) | <i>Anita</i> | * | | 20 min | | 28.7 | 29.2 | | |
| | | <i>Tina</i> | * | | 20 min | | 28.6 | 30.0 | ↑ (significantly) | |
| | Pea (<i>Pisum sativum</i> L.) flour | <i>Yellow-green (Windham)</i> | * | | 98 °C, 30 min | IVPD (trypsin, chymotrypsin, and peptidase, 10 min) | 79.9 | 85.9 | ↑ (significantly) | [21] |
| | | <i>Yellow-green (Spector)</i> | * | | 98 °C, 30 min | | 81.3 | 85.9 | | |
| | | <i>Green (Stirling)</i> | * | | 98 °C, 30 min | | 82.0 | 85.9 | | |
| | | <i>Yellow (Fallon)</i> | * | | 98 °C, 30 min | | 82.6 | 86.5 | | |
| | | <i>Pale green (Supra)</i> | * | | 98 °C, 30 min | | 82.4 | 86.0 | | |
| | | <i>Yellow (Shawnee)</i> | * | | 98 °C, 30 min | | 83.5 | 86.8 | | |
| | | <i>Green (Lifter)</i> | * | | 98 °C, 30 min | | 83.5 | 86.3 | | |
| | | <i>Yellow-green (DSP)</i> | * | | 98 °C, 30 min | | 82.3 | 86.8 | | |
| | | <i>Mean</i> | * | | 98 °C, 30 min | | 82.2 | 86.3 | | |

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|---|---------------------|---|---|--|---|-------|-------|---|------|
| Full-fat soybean (FFSB) | | | * | 80 °C, 1 min | SID (pig) of CP | 46 | 52 | ↑ (Reduced trypsin inhibitors) | [16] |
| | | | * | 100 °C, 6 min | | | 73 | | |
| | | | * | 100 °C, 16 min | | | 80 | | |
| Pea (<i>Pisum sativum</i>) flour | <i>Green pea</i> | * | | brought to a boil and maintained until done, 25–35 min | IVPD (trypsin, chymotrypsin and protease, 10 min) | | 86.56 | | [30] |
| | <i>Yellow pea</i> | * | | | | | 86.75 | | |
| Lentil (<i>Lens culinaris</i>) flour | <i>Red lentil</i> | * | | brought to a boil (100 °C) and maintained, 25–35 min | IVPD (trypsin, chymotrypsin and protease, 10 min) | | 84.67 | | [31] |
| | <i>Green lentil</i> | * | | | | | 84.03 | | |
| Pea (<i>Pisum sativum</i> L.) | | | * | 100 °C, 40 min—high heat; 30 min—simmered | TD | 74.7 | 79.8 | ↑ (significantly) | [20] |
| Chickpea (<i>Cicer arietinum</i> L.) | | * | | 100 °C, 90 min | IVPD (trypsin, pancreatin, 10 min) | 83.61 | 88.52 | ↑ (significantly) (Reduced trypsin inhibitors, tannins, phytic acid) | [22] |
| Bitter lupin seed (<i>Lupinus termis</i>) | | | * | Cooked in distilled water (100 °C) 1:10 (w/v), 40 min | IVPD (multienzyme assay, 10 min) | 78.55 | 80.73 | ↑ (significantly) (Reduced trypsin inhibitors, phytic acid (except sweet lupin), tannins) | [26] |
| | | * | | | | | 89.72 | | |
| Sweet lupin seed (<i>Lupinus albus</i>) | | | * | | | | 84.35 | | |
| | | * | | 79.46 | 86.09 | | | | |

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|--|-------------------|--------|------|--|---|---|------|--|--|-------------------|
| Vegetable pea (<i>Pisum sativum</i> L.) | | | * | Cooked in water (1:2 seed:water) at 100 °C | 20 min | IVPD (trypsin, α -chymotrypsin, peptidase, 10 min) | 73.5 | 76.0 | ↑ (Reduced trypsin inhibitors, phytic acid, tannins) | [23] |
| | | | * | | 30 min | | | 77.2 | | |
| | | | * | | 40 min | | | 78.3 | | |
| Lentil (<i>Lens culinaris</i>) | <i>Pardina</i> | | * | 98 °C for 30 min | IVPD (trypsin, chymotrypsin, and peptidase) | 79.1 | 83.6 | ↑ (significantly) | [24] | |
| | | *, 3h | | | | | 83.3 | | | ↑ |
| | | *, 12h | | | | | 83.6 | | | ↑ |
| | <i>Crimson</i> | | * | | | | 79.4 | 82.2 | | ↑ (significantly) |
| | | *, 3h | | | | | | 83.1 | | |
| | | *, 12h | | | | | | 83.7 | | |
| Chickpea (<i>Cicer arietinum</i> L.) | | | * | 74.3 | 82.5 | ↑ (significantly) | | | | |
| | *, 3h | | 82.9 | | ↑ (significantly) | | | | | |
| | *, 12h | | 82.4 | | ↑ | | | | | |
| Pea (<i>Pisum sativum</i>) | <i>Yellow</i> | | * | 82.0 | 84.0 | ↑ (significantly) | | | | |
| | | *, 3h | | | | | 84.5 | ↑ (significantly) | | |
| | | *, 12h | | | | | 84.3 | ↑ | | |
| | <i>Green</i> | | * | | | | 82.6 | 84.1 | ↑ (significantly) | |
| | | *, 3h | | | | | | 84.5 | | ↑ |
| | | *, 12h | | | | | | 83.6 | | ↑ |
| Soybean (<i>Glycine max</i>) | | | * | 71.8 | 83.8 | ↑ (significantly) | | | | |
| | *, 3h | | 85.1 | | | | | | | |
| | *, 12h | | 85.0 | | | | | | | |
| Black gram | <i>Punjab91</i> | * | | Boiled, seed:water ratio of 1:5 | IVPD (pepsin-HCl, 24 h) | 34.8 | 65.0 | ↑ (significantly) (Reduced phytic acid, tannins) | [11] | |
| Chickpea | <i>CP-98</i> | * | | | | 36.0 | 69.0 | | | |
| Lentil | <i>Nayyab2002</i> | * | | | | 37.6 | 72.7 | | | |

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|-------------------|--------------------------------------|-----------------------|--|----------------------|----------|--------------------------|--------------------------|-------|--|------|----------|---|------|------|--|------|
| Microwave cooking | Kidney bean | <i>Red (Chkwal99)</i> | * | | | | 33.8 | 64.1 | ↑ (significantly) (Reduced trypsin inhibitors, phytic acid, tannins) | [25] | | | | | | |
| | | <i>White (WK-70)</i> | * | | | | 34.0 | 63.6 | | | | | | | | |
| | Kidney bean (<i>P. vulgaris</i> L.) | <i>Roba</i> | | | * | 1:3 (w/v), 97 °C, 35 min | IVPD (multienzyme assay) | 80.66 | | | 87.11 | | | | | |
| | | | * | | 90.31 | | | | | | | | | | | |
| | | | NaHCO ₃ | | 90.34 | | | | | | | | | | | |
| | | <i>Awash</i> | | | * | | | 71.14 | | | 78.28 | | | | | |
| | | | * | | 78.98 | | | | | | | | | | | |
| | | | NaHCO ₃ | | 78.88 | | | | | | | | | | | |
| | | <i>Beshbesh</i> | | | * | | | 65.63 | | | 71.55 | | | | | |
| | | | * | | 73.52 | | | | | | | | | | | |
| | | | NaHCO ₃ | | 72.85 | | | | | | | | | | | |
| | | Microwave cooking | Bean (<i>vicia faba</i> var. <i>major</i>) | <i>Windsor White</i> | * | | | | | | 500 J/g | IVPD (peptidase, trypsin, chymotrypsin) | 46.0 | 57.1 | ↑ (significantly) (Reduced trypsin inhibitors) | [27] |
| | | | | | * | | | | | | 750 J/g | | | 69.4 | | |
| | | | | | * | | | | | | 1000 J/g | | | 76.5 | | |
| * | | | | | 1250 J/g | 78.7 | | | | | | | | | | |
| * | | | | | 1500 J/g | 79.0 | | | | | | | | | | |
| * | | | | | 1750 J/g | 78.8 | | | | | | | | | | |
| * | | | | | 2000 J/g | 78.8 | | | | | | | | | | |
| <i>Bacchus</i> | * | | | | 500 J/g | 52.2 | 68.0 | | | | | | | | | |
| | * | | | | 750 J/g | | 73.2 | | | | | | | | | |
| | * | | | | 1000 J/g | | 76.1 | | | | | | | | | |
| | * | | | | 1250 J/g | | 78.4 | | | | | | | | | |
| | * | | | | 1500 J/g | | 78.9 | | | | | | | | | |

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|----------|--|--|---|----------|------------------------------|------|------|--|------|--|--|
| | | * | | 1750 J/g | | | 79.0 | | | | |
| | | * | | 2000 J/g | | | 78.8 | | | | |
| | <i>Basta</i> | * | | 500 J/g | | 51.5 | 53.2 | | | | |
| | | * | | 750 J/g | | | 64.1 | | | | |
| | | * | | 1000 J/g | | | 78.2 | | | | |
| | | * | | 1250 J/g | | | 78.8 | | | | |
| | | * | | 1500 J/g | | | 79.8 | | | | |
| | | * | | 1750 J/g | | | 81.2 | | | | |
| | | * | | 2000 J/g | | | 81.0 | | | | |
| Bean | | Broad bean (<i>Vicia faba</i>) | * | | | | | | 77.4 | | |
| | | Field bean (<i>Dolichos lablab</i>) | * | | | | | | 71.2 | | |
| | Green gram (<i>Phaseolus aureus</i> Roxb) | * | | | | | 78.1 | | | | |
| | Horse gram (<i>Dolichos biflorus</i>) | * | | | | | 69.8 | | | | |
| | French bean (<i>Phaseolus vulgaris</i>) | * | | | | | 74.6 | | | | |
| Lentil | <i>Lens esculenta</i> | * | | | IVPD (pepsin, pancreatin) | | 78.7 | | [13] | | |
| Chickpea | <i>Bengal gram</i> (<i>Cicer arietinum</i>) | * | | | | | 74.1 | | | | |
| Pea | <i>Cowpea</i> (<i>Vigna catjang</i>) | * | | | | | 73.7 | | | | |

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| | Chickpea (<i>Cicer arietinum</i> L.) | | * | on high level, 15 min | | IVPD (trypsin, pancreatin, 10 min) | 83.61 | 89.40 | ↑ (Reduced trypsin inhibitors, tannins, phytic acid) | [22] | |
| | Bitter lupin seed (<i>Lupinus termis</i>) | | | seed:water ratio 1:10, for 6 min | | IVPD (multienzyme method, 10 min) | 78.55 | 80.54 | ↑ (significantly) (Reduced trypsin inhibitors, phytic acid, tannins) | [26] | |
| | | | * | | | | | | | | 85.75 |
| | Sweet lupin seed (<i>Lupinus albus</i>) | | | | | | | * | | | 80.67 |
| | | | * | | | | | (24 h after MW) | | | 81.51 |
| | Vegetable pea (<i>Pisum sativum</i> L.) | | | 2450 MHz | 4 min | IVPD (trypsin, α-chymotrypsin, peptidase, 10 min) | 73.5 | 74.2 | ↑ (Reduced trypsin inhibitors, tannins, and phytic acid (only at 12 min)) | [23] | |
| | | | * | | 8 min | | | 75.1 | | | |
| | | | * | | 12 min | | | 75.5 | | | |
| Pressure cooking | Moth bean (<i>Phaseolus aconitifolius</i> Jacq.) | Local | | 15 min | | IVPD (pepsin, pancreatic) | 70.3 | 78.1 | | [12] | |
| | | | | | | | | * | | | 10 min |
| | | Jwala | | 15 min | | | | * | | | 78.9 |
| | | | | | | | | * | | | 10 min |

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|--|--|---|--------|--------|--------|--|-------|--|------|
| | RMO 225 | * | 15 min | | | 72.3 | 78.2 | | |
| | | * | 10 min | | | | 83.9 | | |
| | RMO 257 | * | 15 min | | | 74.7 | 82.4 | | |
| | | * | 10 min | | | | 85.2 | | |
| Bean | Broad bean (<i>Vicia faba</i>) | * | | | | IVPD (pepsin, pancreatin) | 80.0 | | [13] |
| | Field bean (<i>Dolichos lablab</i>) | * | | | | | 75.9 | | |
| | Green gram (<i>Phaseolus aureus Roxb</i>) | * | | | | | 81.9 | | |
| | Horse gram (<i>Dolichos biflorus</i>) | * | | | | | 78.4 | | |
| | French bean (<i>Phaseolus vulgaris</i>) | * | | | | | 78.9 | | |
| Lentil | <i>Lens esculenta</i> | * | | | | 82.6 | | | |
| Chickpea | Bengal gram (<i>Cicer arietinum</i>) | * | | | | 80.1 | | | |
| Pea | Cowpea (<i>Vigna catjang</i>) | * | | | | 80.5 | | | |
| Vegetable pea (<i>Pisum sativum L.</i>) | | * | | 120 °C | 10 min | IVPD (trypsin, α - chymotrypsin, peptidase, 10 min) | 77.4 | ↑ (Reduced trypsin inhibitors, tannins, and phytic acid (only at 20 min)) | [23] |
| | | * | | | 15 min | | 78.3 | | |
| | | * | | | 20 min | | 78.12 | | |

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|-------------|--|---------------|---|----------------|----------------|-----------------------------------|---|--------|--|--|------|
| Autoclaving | Bean flour (<i>Phaseolus vulgaris</i>) | <i>Raba</i> | * | 121 °C, 7 min | | CP | 24.8 | 21.8 | ↓ (significantly) | [15] | |
| | | <i>Warta</i> | * | 121 °C, 12 min | | | 26.2 | 21.0 | | | |
| | Pea flour (<i>Pisum sativum</i>) | <i>Milwa</i> | * | 121 °C, 12 min | | | 25.9 | 24.4 | | | |
| | | <i>Medal</i> | * | 121 °C, 12 min | | | 28.4 | 27.1 | | | |
| | Lentil flour (<i>Lens culinaris</i>) | <i>Anita</i> | * | 121 °C, 7 min | | | 28.7 | 28.2 | ↓ | | |
| | | <i>Tina</i> | * | 121 °C, 7 min | | | 28.6 | 28.7 | ↑ | | |
| | Yellow pea flour (<i>Pisum sativum, L.</i>) | Concentrate 1 | * | 108 °C, 8 min | | AID and SID (chicken) of CP | AID 80.1 | 88.1 | ↑ (Reduced trypsin inhibitors) | [28] | |
| | | | | | | | SID 88.7 | 95.0 | ↑ (significantly) (Reduced trypsin inhibitors) | | |
| | | Concentrate 2 | * | 108 °C, 8 min | | | AID 84.3 | 87.2 | (Reduced trypsin inhibitors) | | |
| | | | | | | | SID 91.6 | 95.0 | (Reduced trypsin inhibitors) | | |
| | Full-fat soybean (FFSB) | | | * | 110 °C | SID (pig) of CP | 46 | 82 | ↑ (Reduced trypsin inhibitors) | [16] | |
| | | | | * | | | | 30 min | | | 83 |
| | | | | * | | | | 45 min | | | 84 |
| | | | | * | | | | 60 min | | | 82 |
| | Chickpea (<i>Cicer arietinum L.</i>) | | * | | 121 °C, 35 min | | IVPD (trypsin, pancreatin, 10 min) | 83.61 | 89.96 | ↑ (Reduced trypsin inhibitors, tannins, phytic acid) | [22] |

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|--|--|---|--------------------------|----------------|---|-------|-------|---|------|
| Faba bean (<i>Vicia faba</i> L.) | | * | | 120 °C, 20 min | IVPD (trypsin, chymotrypsin and peptidase, 10 min, protease, 9 min) | 83.07 | 79.57 | ↓ (significantly) | [29] |
| Lentil (<i>Lens culinaris Medikus</i>) | | * | | | | 82.50 | 81.66 | ↓ | |
| Chickpea (<i>Cicer arietinum L.</i>) | | * | | | | 78.28 | 83.16 | ↑ (significantly) | |
| Dry white bean (<i>Phaseolus vulgaris</i> L.) | | * | | | | 73.76 | 80.53 | ↑ (significantly) | |
| Bitter lupin seed (<i>Lupinus terminis</i>) | | | * | 121 °C, 20 min | IVPD (multienzyme assay, 10 min) | 78.55 | 82.84 | ↑ (significantly) (Reduced trypsin inhibitors, phytic acid (except sweet lupin), tannins) | [26] |
| | | * | (after treatment) | | | 91.53 | | | |
| Sweet lupin seed (<i>Lupinus albus</i>) | | | * | | | 79.46 | 83.93 | | |
| | | * | (after treatment) | | | 85.95 | | | |
| Black gram <i>Punjab91</i> | | * | | 121 °C | IVPD (pepsin-HCl, 24h) | 34.8 | 68.0 | | [11] |
| | | | 20 min | | | | 64.5 | | |
| | | | 40 min | | | | 62.8 | | |
| | | | 60 min | | | | 62.0 | | |
| | | | 90 min | | | | 61.8 | | |

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|-------------|----------------|------|--|--------|------------|--------|------|--|
| | | | | 128 °C | 20 min | | 62.4 | |
| Chickpea | CP-98 | * | | 121 °C | 10 min | | 72.5 | ↑ (significantly) (Reduced phytic acid, tannins) |
| | | | | | 20 min | 68.5 | | |
| | | | | | 40 min | 67.0 | | |
| | | | | | 60 min | 65.7 | | |
| | | | | | 90 min | 64.9 | | |
| | | | | | 128 °C | 20 min | 65.0 | |
| | | | | Lentil | Nayyab2002 | * | | |
| 20 min | 72.0 | | | | | | | |
| 40 min | 70.8 | | | | | | | |
| 60 min | 68.0 | | | | | | | |
| 90 min | 67.8 | | | | | | | |
| 128 °C | 20 min | 68.0 | | | | | | |
| Kidney bean | Red (Chkwal99) | * | | 121 °C | 10 min | | 68.3 | |
| | | | | | 20 min | 64.0 | | |
| | | | | | 40 min | 62.4 | | |
| | | | | | 60 min | 61.0 | | |
| | | | | | 90 min | 60.5 | | |
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|--------|--|------------|--------------------|--------|----------------------------------|--------------------------|--|-------|--|------|-------|-------|
| | | | | | 128 °C | 20 min | | 61.8 | | | | |
| | | | | | 121 °C | 10 min | 34.0 | 69.8 | | | | |
| | | | | 20 min | | 63.0 | | | | | | |
| | | | | 40 min | | 61.4 | | | | | | |
| | | | | 60 min | | 60.0 | | | | | | |
| | | | | 90 min | | 59.9 | | | | | | |
| | | | | 128 °C | | 20 min | | 61.0 | | | | |
| | | | | | | | | | | | | |
| | Kidney bean (<i>P. vulgaris</i> L.) | Roba | | * | 1:3 (w/v), 121 °C, 30 min | IVPD (multienzyme assay) | 80.66 | 86.31 | ↑ (significantly) (Reduced trypsin inhibitors, phytic acid, tannins) | [25] | | |
| | | | * | | | | | 92.76 | | | | |
| | | | NaHCO ₃ | | | | | 92.84 | | | | |
| | | Awash | | * | | | | 71.14 | | | 76.12 | |
| | | | * | | | | | | | | 82.53 | |
| | | | NaHCO ₃ | | | | | | | | 81.82 | |
| | | Beshbesh | | * | | | | | | | 65.63 | 69.58 |
| | | | * | | | | | | | | | 74.77 |
| | | | NaHCO ₃ | | | | | | | | | 74.83 |
| Baking | Dry pea flour (<i>Pisum sativum</i>) | Yellow pea | | * | 198.3 °C, 198.3 °C, and 165.6 °C | 35 min | IVPD (trypsin, chymotrypsin, and protease, 10 min) | | 82.49 | | | [30] |
| | | Green pea | | * | | | | | 29 min | | | |
| | | Red lentil | | * | | | IVPD | | 85.03 | | | [31] |

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|---|---|-----------------------------|--------|------------------------------------|-----------|---|----------|----------------------|--|------|
| | Lentil flour (<i>Lens culinaris</i>) | <i>Green lentil</i> | * | 198.3 °C, 198.3 °C, and 165.6 °C | 35 min | (trypsin, chymotrypsin and protease, 10 min) | | 79.33 | | |
| Extrusion | Dry pea flour (<i>Pisum sativum</i>) | <i>Yellow pea</i> | * | 30–50 °C, 70–90 °C, and 100–120 °C | | IVPD (trypsin, chymotrypsin and protease, 10 min) | | 86.93 | | [30] |
| | | <i>Green pea</i> | * | | | | | 90.0 | | |
| | Lentil flour (<i>Lens culinaris</i>) | <i>Red lentil</i> | * | 30–50 °C, 70–90 °C, and 100–120 °C | | IVPD (trypsin, chymotrypsin and protease, 10 min) | | 88.01 | | [31] |
| | | <i>Green lentil</i> | * | | | | | 84.30 | | |
| | Pea (<i>Pisum sativum</i> L., <i>Tarachalska cv.</i>) | | * | 135 ± 10 °C | | AID of CP | 74.3 | 85.9 | ↑ (significantly) (Reduced trypsin inhibitors, phytic acid) | [34] |
| | Common Bean flour (<i>Phaseolus vulgaris</i> , L.) | <i>BRS pontal (carioca)</i> | * | 150 °C | | IVPD (pepsin, pancreatin) | 28.16 | 48.52 | ↑ (significantly) (Reduced trypsin inhibitors, phytic acid) | [14] |
| | | <i>BRS grafite (black)</i> | * | | | | 28.62 | 52.80 | | |
| | Pea flour (<i>Pisum sativum</i> L.) | | * | 145 °C | | IVPD (trypsin, α-chymotrypsin, peptidase) | 839 g/kg | 874 g/kg | ↑ (significantly) (Reduced trypsin inhibitors, phytic acid, tannins, polypehnlols) | [33] |
| Kidney Bean flour (<i>Phaseolus</i> | <i>100 g/kg of extruded</i> | * | 150 °C | | AID of CP | 89.60 (without kidney) | 85.50 | ↑ (significantly) | [35] | |

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|-------------------------------------|---|---|-----------|--------|----------------|--|---|----------------------|--|------|------|------|
| | <i>vulgaris</i> L. <i>var. Pinto</i>) | <i>kidney bean</i> (EKB) | | | | | bean), 79.03 (100 g/kg raw KB), 79.53 (200 g/kg raw KB), 77.23 (300 g/kg raw KB) | | | | | |
| | | 200 g/kg of EKB | | * | | | | 85.50 | | | | |
| | | 300 g/kg of EKB | | * | | | | 85.90 | | | | |
| | Bean flour | Common bean (<i>Phaseolus vulgaris</i> , L.) | | * | 152 °C, 156 °C | IVPD (trypsin, α - chymotrypsin, peptidase, 10 min) | 68.1 | 83.0 | ↑ (significantly) (Reduced trypsin inhibitors, phytic acid, tannins, polypehnols) | [32] | | |
| Broad bean (<i>Vicia faba</i>) | | | * | 70.8 | | | 87.4 | | | | | |
| New processing methods | Lentil (<i>Lens culinaris</i>) | <i>Pardina</i> | *1, 1.5 h | | 47 kHz | IVPD (trypsin, chymotrypsin, and peptidase) | 79.1 | 79.8 | ↑ (significantly) | [24] | | |
| | | | *1, 3 h | | | | | 80.1 | | | | |
| | | | *2, 0.5 h | | 79.1 | | | | | | | |
| | | | *2, 1 h | | 79.7 | | | | | | | |
| | | <i>Crimson</i> | *1, 1.5 h | | 47 kHz | | 79.4 | 80.2 | ↑ (significantly) | | | |
| | | | *1, 3 h | | | | | 80.9 | | | | |
| | | | *2, 0.5 h | | 79.8 | | | | | | | |
| | | | *2, 1 h | | 81.0 | | | | | | | |
| | Chickpea (<i>Cicer arietinum</i> L.) | | *1, 1.5 h | 47 kHz | 74.3 | 74.1 | 74.5 | ↑ (significantly) | | | | |
| | | | *1, 3 h | | | | | | 621 MPa | 76.2 | | |
| | | | *2, 0.5 h | 47 kHz | | | | | | | 82.0 | 81.2 |
| | | | *2, 1 h | | | | | | 621 MPa | | | |
| | Pea (<i>Pisum sativum</i>) | <i>Yellow</i> | *1, 1.5 h | 47 kHz | 82.6 | 81.9 | ↓ (significantly) | | | | | |
| | | | *1, 3 h | | | | | 621 MPa | 82.0 | | | |
| | | | *2, 0.5 h | 47 kHz | | | | | | 81.2 | | |
| | | | *2, 1 h | | | | | 621 MPa | | | 81.3 | |
| | <i>Green</i> | *1, 1.5 h | 47 kHz | 82.6 | 81.9 | ↓ (significantly) | | | | | | |
| | | *1, 3 h | | | | | 621 MPa | 82.0 | | | | |

| | | | | | | | |
|---|--|-----------|--|---------------------------|-------------------|--------------------------------|---|
| | | *2, 0.5 h | | 621 MPa | | 81.2 | |
| | | *2, 1 h | | | | 82.0 | |
| Soybean (<i>Glycine max</i>) | | *1, 1.5 h | | 47 kHz | | 72.1 | ↑ |
| | | *1, 3 h | | | | 71.6 | ↓ |
| | | *2, 0.5 h | | 621 MPa | 71.8 | 72.2 | ↑ |
| | | *2, 1 h | | | | 73.1 | (significantly) |
| | | | | 350 MPa, 45 min, 40 °C | | 80.7 (mean of all three) | ↓ (Reduced trypsin inhibitors, phytic acid) |
| | | | | 600 MPa, 60 min, 60 °C | | 85.8 | ↑ (Reduced trypsin inhibitors, phytic acid) |
| | | | | 100 MPa, 60 min, 20 °C | | 78.6 | ↓ (Reduced trypsin inhibitors, phytic acid) |
| Dry split pea (<i>Pisum sativum</i>) | | | | 600 MPa, 30 min, 20 °C | 82.3 | 82.3 | (Reduced trypsin inhibitors, phytic acid) |
| | | | | 100 MPa, 60 min, 60 °C | | 79.2 | ↓ (Reduced trypsin inhibitors, phytic acid) |
| | | | | 600 MPa, 30 min, 60 °C | | 83.3 | ↑ (Reduced trypsin inhibitors, phytic acid) |
| | | | | 100 MPa, 30 min, 60 °C | | 79.6 | ↓ |
| | | | | | IVPD (trypsin) | | [10] |

| | | | | | | | |
|---|--|--|--|---------------------------|------|--------------------------------|---|
| | | | | 600 MPa, 60 min, 20 °C | | 82.1 | (Reduced trypsin inhibitors, phytic acid) |
| | | | | 100 MPa, 30 min, 20 °C | | 79.9 | |
| | | | | 350 MPa, 45 min, 40 °C | | 68.0 (mean of all three) | ↓ (Reduced trypsin inhibitors, phytic acid) |
| | | | | 600 MPa, 60 min, 60 °C | | 75.1 | ↑ (Reduced trypsin inhibitors, phytic acid) |
| White beans (<i>Phaseolus vulgaris</i>) | | | | 100 MPa, 60 min, 20 °C | 69.1 | 68.5 | ↓ (Reduced trypsin inhibitors, phytic acid) |
| | | | | 600 MPa, 30 min, 20 °C | | 69.0 | |
| | | | | 100 MPa, 60 min, 60 °C | | 67.5 | |
| | | | | 600 MPa, 30 min, 60 °C | | 68.8 | |
| | | | | 100 MPa, 30 min, 60 °C | | 68.8 | |
| | | | | 600 MPa, 60 min, 20 °C | | 68.9 | |
| | | | | 100 MPa, 30 min, 20 °C | | 63.8 | |

¹ CP: Crude protein, IVPD: *In vitro* protein digestibility, SID: standardized ileal digestibility, TD: True digestibility, AID: Apparent ileal digestibility

*¹ Soaked under ultrasound, *² Soaked under high pressure.