**Consonant**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **ADAPT** | **SAMPA1 (ADAPT 1)** | **SAMPA2 (origin 2)** | **SAMPA3 (students used 3)** | **CGN** | **CGN2 4** | **Dutch** | **English** | **IPA** |
| **Plosives** | p | p | p | p | p | p | Pak | sport | p |
|  | b | b | b | b | b | b | Bak | bait | b |
|  | t | t | t | t | t | t | Tak,had | stop | t |
|  | d | d | d | d | d | d | dak | duck | d |
|  | k | k | k | k | k | k | kap | school | k |
|  | g | g | g | g | g | g | goal (only foreign/loan-words) | goal | g |
| **Fricatives** | f | f | f | f | f | f | Fel | feats | f |
|  | v | v | v | v | v | v | Vel | very | v |
|  | s | s | s | s | s | s | Sein,sok | sock | s |
|  | z | z | z | z | z | z | zijn | zip | z |
|  | S | S | S | S | S | S | Show,chef,sjabloon, action (CGN2) | Shall | ʃ |
|  | Z | Z | Z | Z | Z | Z | Bagage,jury | vision | ʒ |
|  | G | G | G | G | G | G | Goed,gaan | loch | [ɣ](https://en.wikipedia.org/wiki/Voiced_velar_fricative) |
|  | X/x | x | x | x | x | x | Toch,weg,acht | loch | x |
|  | h | h | h | h | h | h | Hand,had | behind | [ɦ](https://en.wikipedia.org/wiki/Voiced_glottal_fricative) |
| **Sonorants** | m | m | m | m | m | m | met | man | m |
|  | n | n | n | n | n | n | net | neck | n |
|  | N | N | N | N | N | N | bang | long | [ŋ](https://en.wikipedia.org/wiki/Velar_nasal) |
|  | l | l | l | l | l | l | land | land | l |
|  | r | r | r | r | r | r | rand | trilled R or guttural R | r |
|  | w | w | w | w | w | w | Wit, wang | between wine and vine | ʋ |
|  | j | j | j | j | j | j | ja | yard | j |
|  | J | n˽j\*\* | n˽j\*\* | n˽j\*\* | J | J | Campagne, oranje, trijntje | Like canyon | ɲ |

1[https://www.cls.ru.nl/clst-asr/doku.php?id=phonalpha&s[]=sampa](https://www.cls.ru.nl/clst-asr/doku.php?id=phonalpha&s%5b%5d=sampa) & Appendix A in ADAPT paper: <http://lands.let.ru.nl/literature/elffers.2005.1.pdf>

2<https://www.phon.ucl.ac.uk/home/sampa/dutch.htm>

3Used by students Julia Merkus, Emma de Reus and Fleur Boogmans in 2019 – 2020 for manually checking orthographic transcriptions of COPD, JASMIN and CHASING datasets, respectively.

4 Used by Dutch Forced Aligner (FA: <https://www.cls.ru.nl/clst-asr/doku.php?id=forced-aligner>) and Grapheme to Phoneme converter (G2P <https://webservices-lst.science.ru.nl/g2pservice/index/>)

**Vowel**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **ADAPT** | **SAMPA1 (ADAPT)** | **SAMPA2 (origin)** | **SAMPA3 (students used)** | **CGN** | **CGN2** | **Dutch** | **English** | **IPA** |
| **Lang** | i | i | i | i | i | i | Vier | deep | i |
|  | e | e | e: | e: | e | e | veer | made | e: |
|  | a | a | a: | a: | a | a | naam | lad | a: |
|  | o | o | o: | o: | o | o | voor | born | o: |
|  | u | u | u | u | u | u | voer | boot | u |
|  | y | y | y | y | y | y | vuur | goose | y |
|  | 2 | UNK | 2: | 2: | 2 | EU | deur | fur | øː |
| **Korte** | I | I | I | I | I | I | pit | sit | I |
|  | E | E | E | E | E | E | pet | bed | ɛ |
|  | A | A | A | A | A | A | pad | Father(short) | ɑ |
|  | O | O | O | O | O | O | pot | off | ɔ |
|  | Y | Y | Y | Y | Y | U | put | nurse | Y |
| **Sjwa** | @ | @ | @ | @ | @ | @ | gemak/hemel? | Again | ə |
| **Diftongen** | & | Ei | Ei | Ei | E+ | EI | fijn | may | ɛi |
|  | 1 | 9y | 9y | 9y | Y+ | UI | huis | house | œy |
|  | 3 | Au | Au | Au | A+ | AU | Goud | out | ʌu |
| **Leen** | 4 | E: | E: | UNK | E: | E2 | Crème | Square | ɛ: |
|  | 5 | 9 | 9: | UNK | Y: | O j | Freule | fur | œː |
|  | 6 | O: | O: | UNK | O: | O | roze | dog | ɔː |
| **Nasale** | 7 | UNK | UNK | UNK | E~ | E n | Bassin, hautain | doyen | ɛ̃ː |
|  | 8 | UNK | UNK | UNK | A~ | A n | Ensemble, genre | croissant | ɑ̃ː |
|  | 9 | UNK | UNK | UNK | O~ | O n | Compagnon, fond, chanson | montage | ɔ̃ː |
|  | % | UNK | UNK | UNK | Y~ | U n | vingt-et-un |  |  |
| Andere | a˽j\*\* | a˽j\*\* | a:i | a:˽j\* | a˽j\*\* | a˽j\*\* | draai | prize | aːi |
|  | o˽j\*\* | o˽j\*\* | o:i | o:˽j\* | o˽j\*\* | o˽j\*\* | mooi | boys | oːi |
|  | i˽w\*\* | i˽w\*\* | iu | i˽w\* | i˽w\*\* | i˽w\*\* | nieuw | ew or free will | iu |
|  | y˽w\*\* | y˽w\*\* | yu | y˽w\* | y˽w\*\* | y˽w\*\* | duw | few would | yu |
|  | e˽w\*\* | e˽w\*\* | e:u | e:˽w\* | e˽w\*\* | e˽w\*\* | sneeuw | say oo | eːu |
|  | u˽j\*\* | u˽j\*\* | ui | u˽j\* | u˽j\*\* | u˽j\*\* | roeiboot | to eternity | ui |

\* = ‘˽’ separates phonemes in phoneme tier

\*\* = separate phonemes